



Transmitted via Regular Mail

October 17, 2017

Mr. Melvin Hauptman, P.E.
Leader, Sediment Projects/Caribbean Team
U.S. Environmental Protection Agency
Region 2
290 Broadway
New York, NY 10007-1866

Subject: **2017 Annual Groundwater Monitoring Report**
Vega Alta Public Supply Wells Site
Operable Unit 1
Administrative Order II-CERCLA-90302
Vega Alta, Puerto Rico

Dear Mr. Hauptman:

On behalf of the Vega Alta Steering Committee (VASC), Clear Creek Environmental Solutions (CCES) has prepared the attached report to summarize analytical results for the 2017 annual groundwater sampling event at the Vega Alta Public Supply Wells Site, Vega Alta, Puerto Rico.

If you have any questions concerning the monitoring report, please contact either Ed Kolodziej at (610) 992-7981 or Martin Howe at (610) 648-2208 at your earliest convenience.

Sincerely,

CLEAR CREEK ENVIRONMENTAL SOLUTIONS

A handwritten signature in black ink, appearing to read "Richard Stoor".

Richard Stoor
Project Coordinator

RWS:rws
Attachments

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**2017 ANNUAL GROUNDWATER MONITORING REPORT
VEGA ALTA PUBLIC SUPPLY WELLS SITE
VEGA ALTA, PUERTO RICO**

Prepared for:
Vega Alta Steering Committee

October 17, 2017

Prepared By:

A handwritten signature in black ink, appearing to read "Ric Stoor".

Richard Stoor
Project Coordinator

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2017 ANNUAL GROUNDWATER MONITORING REPORT
VEGA ALTA PUBLIC SUPPLY WELLS SITE
VEGA ALTA, PUERTO RICO

1.0 INTRODUCTION

This document presents the results of groundwater sampling conducted during the second quarter of 2017 at the Vega Alta Public Supply Wells Superfund Site, located in Vega Alta, Puerto Rico. This report is submitted to the U.S. Environmental Protection Agency (EPA) in accordance with the requirements of the December 9, 1997 Explanation of Significant Differences, which amended the Operable Unit One remedy component of the September 1987 Record of Decision. The sampling event described herein was conducted on behalf of the Vega Alta Steering Committee (VASC) by IMMAC Environmental Services in accordance with the *Revised Sampling, Analysis and Monitoring Plan, March 2010* (2010 RSAMP), dated March 16, 2010, which updated sampling locations, sampling frequencies, and reporting format proposed in the 1998 Revised Sampling, Analysis and Monitoring Plan (1998 RSAMP). This report has been prepared by Clear Creek Environmental Solutions (CCES) and is submitted to EPA on behalf of the VASC.

2.0 FIELD WORK

Sampling was conducted from May 31 through June 23, 2017. Notification of that activity was provided to Adalberto Bosque, EPA Caribbean Field Office, by letter dated May 15, 2017. Multiport well ports (zones) monitored during the annual sampling event consisted of those indicated in **Table 1**. Well locations are shown on **Figure 1**. As indicated in previous reports and in agreement with EPA, the VASC has suspended sampling at multiport wells M3 and M11 due primarily to unsafe conditions near those wells and because of a redundancy with monitoring data from M6 and M13.

2.1 SAMPLE DESIGNATIONS

Sample collection, preservation, shipping, and quality assurance/quality control (QA/QC) methods were implemented in accordance with the 2010 RSAMP. Field and quality control samples were recorded on Chain-of-Custody records provided by the analytical laboratory and are presented in **Appendix A**. A blind duplicate sample, equipment blank, and field blank were prepared for every twenty (20) field samples collected. The field blank sample was given the fictitious name M7Z1, as this well does not exist. Blind duplicate samples were given fictitious names usually constructed by adding 22 to the Multiport Well number and by substituting an arbitrary number for the zone number. During the second quarter 2017 sampling round, the following duplicate samples were collected:

Date Collected	Sample Name	Duplicate of	Analysis
June 5, 2017	M27Z9	M5Z7	VOCs
June 23, 2017	M31Z7	M9Z5	VOCs

Historically, the naming of samples from the multiport wells has followed more than one convention. The 2010 RSAMP identifies the multiport wells with the prefix “M”. The original prefix given to these wells, which appears in a majority of older documents, is “BVAW” (Bechtel Vega Alta Well), after the company that installed them. Samples were also taken from a well with the “GMW” (Geraghty and Miller Well) designation. During this sampling event, field personnel used the prefix “M” on the Chain-of-Custody records for all well samples, the prefix “EB” for equipment blanks, the prefix “FB” for field blanks, and the prefix “TB” for trip blanks. Sampling “port” numbers in the 2010 RSAMP were designated on the Chain-of-Custody records by the letter “Z” (Zone). Accordingly, a sample from Multiport Well 4, Zone 3, would be named M04Z03 or M4Z3.

2.2 FIELD OBSERVATIONS

During the sampling event, field parameters (pH, temperature, and conductivity) were measured at all sampling locations at the time of sample collection, in accordance with the

procedures set forth in the 2010 RSAMP. These data are presented in **Table 1**. Measured parameters are generally consistent with previous measurements.

3.0 LABORATORY ANALYSES

3.1 SAMPLE RECEIPT

Groundwater samples were submitted to TestAmerica Laboratories, Inc. (TAL), located in Savannah, Georgia, and analyzed for Target Compound List Volatile Organic Compounds (VOCs) by EPA Method 624. TAL assigned each sample set arriving at the laboratory on a given day a unique sample delivery group (SDG) number, as each set comprised fewer than twenty (20) samples. A summary of sampling locations and corresponding SDG numbers is provided at the beginning of **Appendix B**.

3.2 ANALYTICAL RESULTS

A summary of analytical results for the second quarter 2017 monitoring event is presented in **Table 2**. LMS reviewed the data quality of laboratory analytical results. That review included checks of sample collection, documentation, preservation, shipping, and QA/QC methods, including comparison of blank and duplicate samples against groundwater samples. All QA/QC objectives for the field samples were met, with the following minor exceptions:

- Headspace was indicated in the vial for trip blank sample TB060817 on the COC and by TAL in the laboratory report for SDG 680-139744.
- Insufficient sample volume was available to perform a matrix spike (MS) or matrix spike duplicate (MSD) associated with lab control sample batch 680-486137 for SDG 680-140374 and for lab control sample batch 680-484275 of SDG 680-139744. Additionally, insufficient sample volume was available to perform a MS, MSD, or sample duplicate (DUP) associated with lab control sample batches 680-484275 and 680-484624 for SDG 680-139864 and for batch 680-484624 for SDG 680-139995.
- Dichlorodifluoromethane was recovered in excess of the upper limit of the acceptable recovery range for the MS and MSD of sample M6Z6 (680-140108-6) in batch 680-485777.

However, because dichlorodifluoromethane was not detected in the associated field samples and no other compounds exceeded the upper limit of acceptable recovery, its detection is deemed a laboratory artifact.

- The surrogate recoveries between the main and duplicate sample analyses, as identified in Section 2.1, were outside acceptable limits of variance for relative percent difference with respect to the following compounds: 1,1-dichloroethene, cis-1,2-dichloroethene, tetrachloroethene (PCE), and trichloroethene (TCE). Therefore, the reported concentrations for these compounds have been qualified as estimated.

Based on a review of the data and despite the minor exceptions noted above, reported analytical results are consistent with historical information and meet data quality objectives for the 2017 annual monitoring event.

Laboratory analyses identified several VOCs at low concentrations in some wells. TCE was typically the compound with the highest concentration, ranging from non-detect at several locations to 140 micrograms per liter ($\mu\text{g}/\text{L}$) in both M22Z6 and M22Z8. In those samples where TCE was detected, lesser concentrations of PCE, cis-1,2-dichloroethene, 1,1-dichloroethane, and 1,1-dichloroethene were generally also detected. The chlorinated disinfection by-product chloroform was detected in the samples from M4, M6, M8, M9, M12, M13, M16, M17, and M19.

4.0 DISCUSSION

Figure 1 illustrates well locations, current total VOC and TCE concentrations, and the approximate aerial extent of TCE concentrations in groundwater to a limit of one (1) $\mu\text{g}/\text{L}$. Although TCE and low detections of other VOCs were identified at M15 and M16, groundwater flow data suggest that those wells are not located within the VASC plume¹ and arise from an unrelated source. Cross-sections of TCE and total VOC results are shown in **Figure 2**. For each zone sampled during this monitoring event, graphs of TCE concentrations over time are included as **Figures 3 through 15**, and graphs of total VOC concentrations over time are included as

¹ An evaluation of groundwater flow paths and potential sources for TCE detected in groundwater samples was presented in the VASC letter to A. Bosque, February 26, 2009.

Figures 16 through 28. In general, TCE concentrations near the source area (M22) and at wells M2, M4, M5, M6, M8, M9, M12, M13, M15, M17, and M19 continue to exhibit stable or decreasing trends.

TABLES

Table 1
2017 Annual Groundwater Monitoring - Field Parameters
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

Sampling Locations			Field Parameters			
Well Number	Zone Number	Zone Elevation ft MSL	Date	Temperature °C	Conductivity umhos/cm	pH
M2	7	-19	12-Jun-17	27.3	454	6.85
M4	4	-219	15-Jun-17	28.4	475	7.15
M4	8	-99	15-Jun-17	28.6	431	7.41
M5	5	-182	5-Jun-17	27.3	463	6.62
M5	7	-117	5-Jun-17	27.6	439	7.06
M5	10	-2	5-Jun-17	28.1	414	7.25
M6	6	-120	19-Jun-17	27.6	469	7.12
M8	1	-271	16-Jun-17	27.4	465	7.10
M8	5	-151	16-Jun-17	27.5	447	6.87
M8	9	-41	16-Jun-17	28.1	439	6.86
M9	3	-219	23-Jun-17	28.1	482	6.85
M9	5	-154	23-Jun-17	28.1	473	6.90
M9	7	-99	23-Jun-17	28.2	464	6.97
M9	9	-49	23-Jun-17	27.9	464	7.14
M12	6	-116	8-Jun-17	29.2	492	6.64
M13	8	-57	21-Jun-17	27.7	466	7.27
M15	6	-183	13-Jun-17	27.8	519	7.28
M15	10	-36	13-Jun-17	28.0	374	7.33
M16	5	-126	1-Jun-17	27.9	423	6.78
M16	8	-19	1-Jun-17	28.4	405	7.26
M17	1	-195	6-Jun-17	27.4	454	7.07
M17	4	-114	6-Jun-17	27.6	444	7.28
M17	6	-55	6-Jun-17	27.8	462	7.23
M17	8	-0.24	6-Jun-17	28.2	469	7.42
M19	6	-114	31-May-17	27.6	449	6.76
M22	4	-140	9-Jun-17	28.8	371	7.42
M22	6	-85	9-Jun-17	28.6	386	7.41
M22	8	-35	9-Jun-17	29.8	386	7.13
MW-23	na	na	13-Jun-17	--	--	--

Notes:

ft MSL: Elevation in feet with respect to Mean Sea Level.

na: Not applicable.

°C: Degrees Celsius.

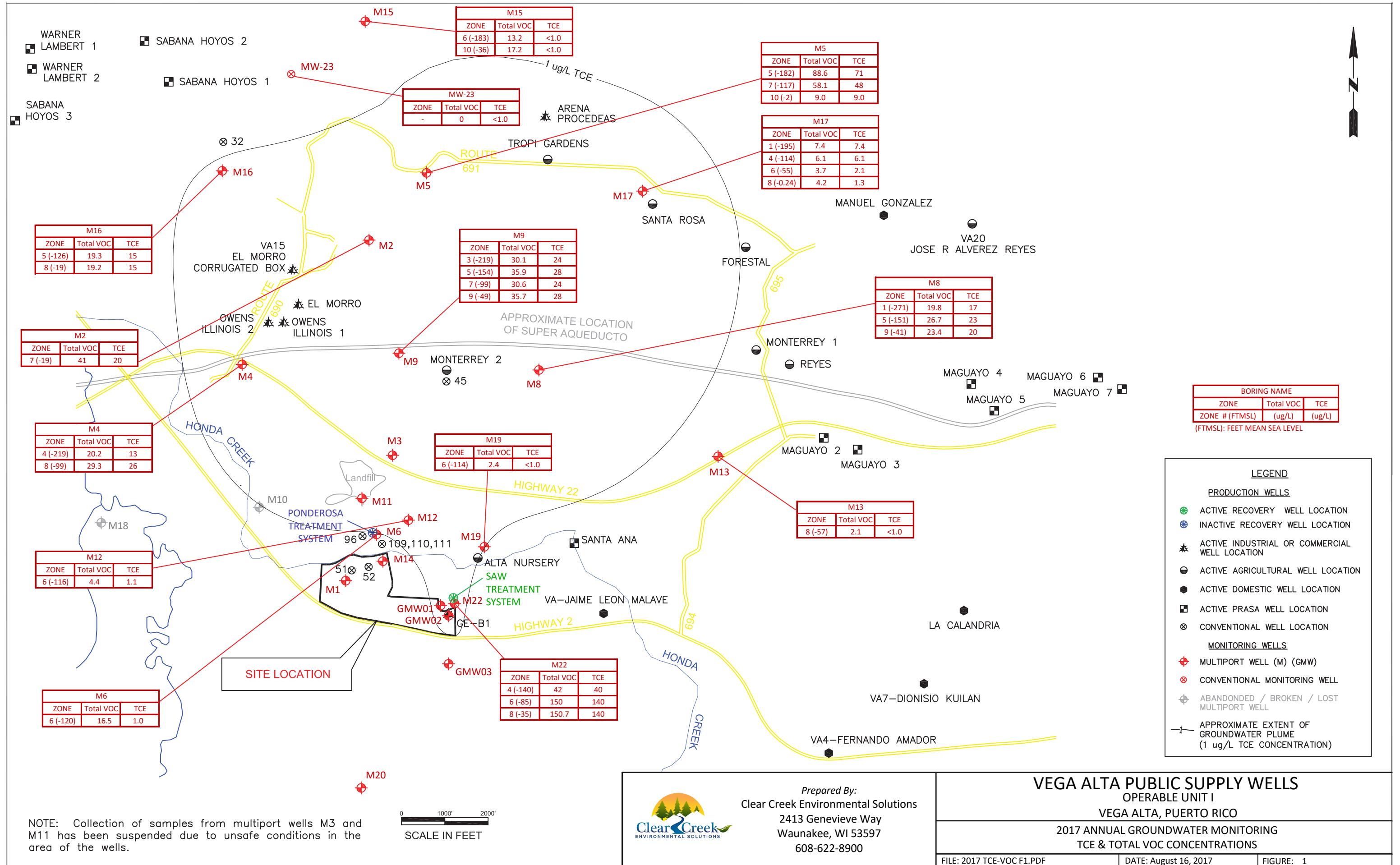
umhos/cm: Micromhos per centimeter.

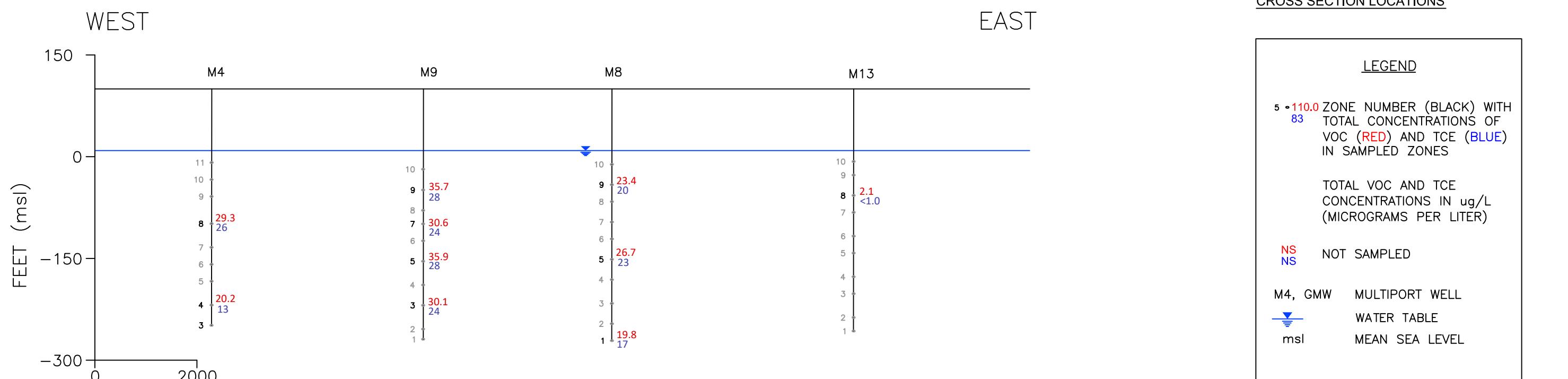
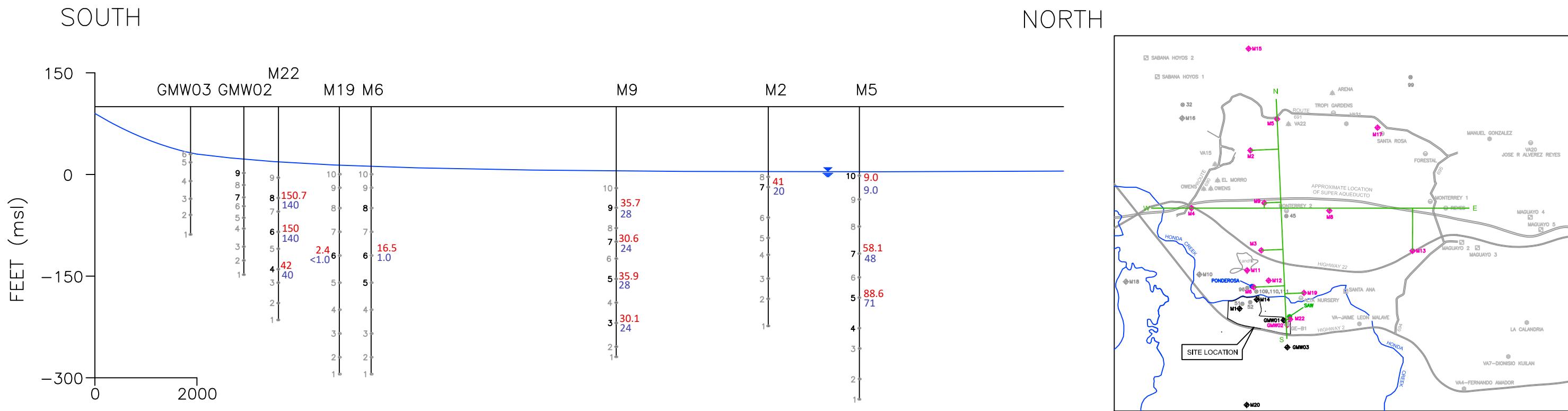
Table 2
2017 Annual Groundwater Monitoring - Volatile Organic Compound Results
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

Note: All Results Reported in ug/L

Location	Date	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloropropane	1,4-Dichlorobenzene	Chlorodibromo methane	Chloroform	Chloromethane	Dichlorobromo methane	Dichlorodifluoro methane	Ethybenzene	Methylene chloride	Naphthalene	Styrene	Tetrachloro ethene	Toluene	Trichloroethene	Trichlorofluoro methane	Vinyl chloride	cis-1,2-Dichloroethene	Xylenes, Total	trans-1,2-Dichloroethene	Total VOCs	
M2Z7	12-Jun-17	<1.0	1.3	16*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	2.2*	<1.0	20*	<1.0	<1.0	1.5*	<2.0	<1.0	41.0	
M4Z4	15-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	4.8	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	2.4*	<1.0	13*	<1.0	<1.0	<1.0	<2.0	<1.0	20.2	
M4Z8	15-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	1.8*	<1.0	26*	<1.0	<1.0	1.5*	<2.0	<1.0	29.3	
M5Z5	5-Jun-17	<1.0	<1.0	10*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	3.6*	<1.0	71*	<1.0	<1.0	4.0*	<2.0	<1.0	88.6	
M5Z7	5-Jun-17	<1.0	<1.0	5.7*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	2.3*	<1.0	48*	<1.0	<1.0	2.1*	<2.0	<1.0	58.1	
M5Z7 (DUP: M27Z9)	5-Jun-17	<1.0	<1.0	8.3*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	3.1*	<1.0	63*	<1.0	<1.0	2.6*	<2.0	<1.0	77.0	
M5Z10	5-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0	<1.0	9.0*	<1.0	<1.0	<1.0	<2.0	<1.0	9.0	
M6Z6	19-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	14	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	1.5*	<1.0	1.0*	<1.0	<1.0	<1.0	<2.0	<1.0	16.5	
M8Z1	16-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.8	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	1.0*	<1.0	17*	<1.0	<1.0	<1.0	<2.0	<1.0	19.8	
M8Z5	16-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.3	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	1.4*	<1.0	23*	<1.0	<1.0	<1.0	<2.0	<1.0	26.7	
M8Z9	16-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	1.4*	<1.0	20*	<1.0	<1.0	<1.0	<2.0	<1.0	23.4	
M9Z3	23-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	4.6	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	1.5*	<1.0	24*	<1.0	<1.0	<1.0	<2.0	<1.0	30.1	
M9Z5	23-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	5.1	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	1.6*	<1.0	28*	<1.0	<1.0	<1.0	<2.0	<1.0	35.9	
M9Z5 (DUP: M31Z7)	23-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	4.7	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	1.5*	<1.0	25*	<1.0	<1.0	<1.0	<2.0	<1.0	32.3	
M9Z7	23-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	4.1	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	1.5*	<1.0	24*	<1.0	<1.0	<1.0	<2.0	<1.0	30.6	
M9Z9	23-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	4.9	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	1.6*	<1.0	28*	<1.0	<1.0	<1.0	<2.0	<1.0	35.7	
M12Z6	8-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	3.3	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0	<1.0	1.1*	<1.0	<1.0	<1.0	<2.0	<1.0	4.4	
M13Z8	21-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.1	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	2.1	
M15Z6	13-Jun-17	<1.0	<1.0	2.2*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	13.2	
M15Z10	13-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	16	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	17.2
M16Z5	1-Jun-17	<1.0	<1.0	2.2*	<1.0	<1.0	<1.0	2.1	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0	<1.0	15*	<1.0	<1.0	<1.0	<2.0	<1.0	19.3	
M16Z8	1-Jun-17	<1.0	<1.0	2.1*	<1.0	<1.0	<1.0	2.1	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0	<1.0	15*	<1.0	<1.0	<1.0	<2.0	<1.0	19.2	
M17Z1	6-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0	<1.0	7.4*	<1.0	<1.0	<1.0	<2.0	<1.0	7.4	
M17Z4	6-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0	<1.0	6.1*	<1.0	<1.0	<1.0	<2.0	<1.0	6.1	
M17Z6	6-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.6	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0	<1.0	2.1*	<1.0	<1.0	<1.0	<2.0	<1.0	3.7	
M17Z8	6-Jun-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.9	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0	<1.0	1.3*	<1.0	<1.0	<1.0	<2.0	<1.0	4.2	
M19Z6	31-May-17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.4	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	2.4	
M22Z4	9-Jun-17	<1.0	<1.0	1.0*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	1.0*	<1.0								

FIGURES



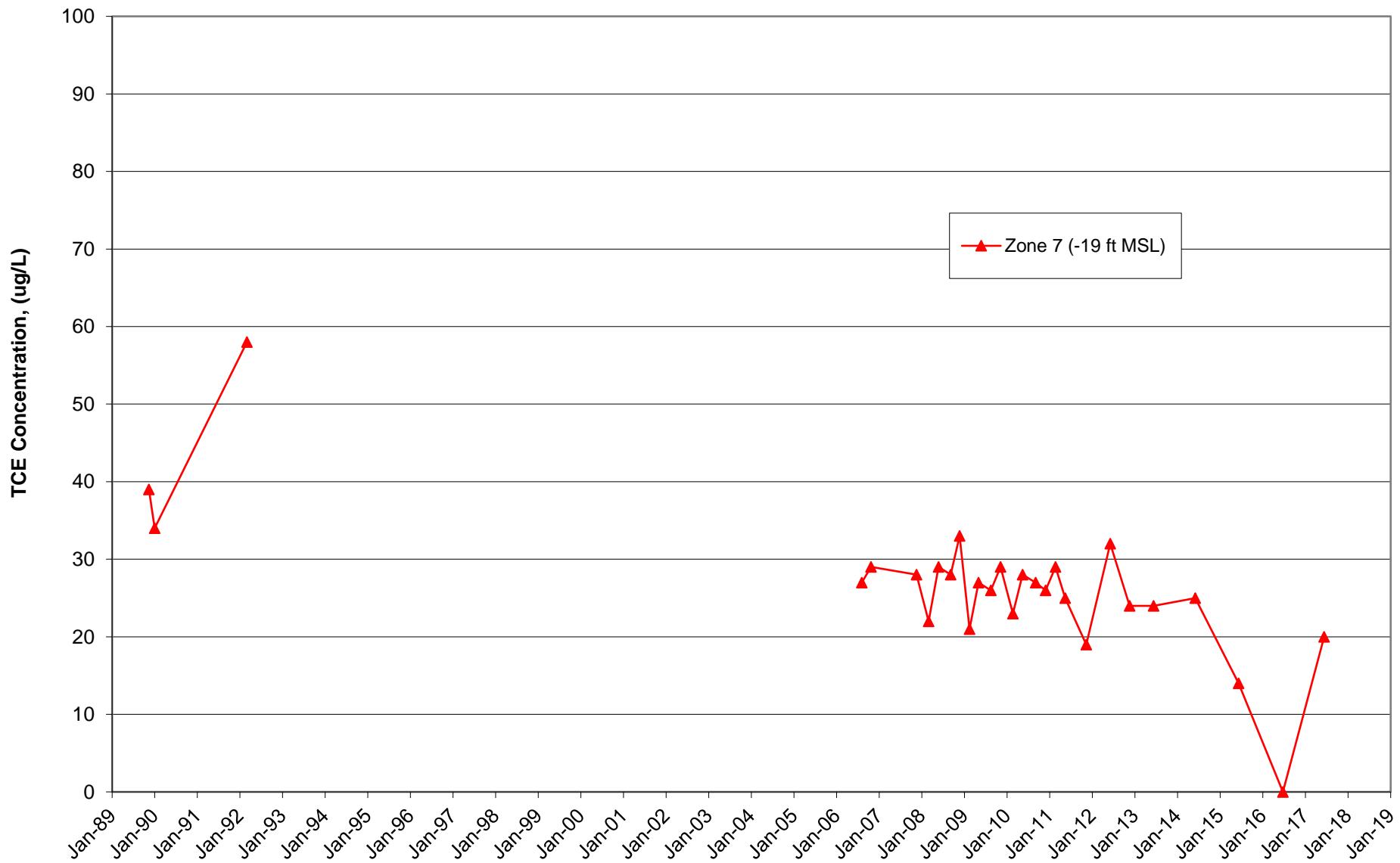


NOTE: Collection of samples from multiport wells M3 and M11 has been suspended due to unsafe conditions in the area of the wells.

DATE	REVISED	Prepared By: Clear Creek Environmental Solutions 2413 Genevieve Way Waunakee, WI 53597 608-622-8900	VEGA ALTA PUBLIC SUPPLY WELLS OPERABLE UNIT I VEGA ALTA, PUERTO RICO	
			2017 ANNUAL GROUNDWATER MONITORING TCE & TOTAL VOC CONCENTRATIONS ALONG SITE CROSS-SECTIONS	FILE: 2017 TCE-VOC Cross F2.PDF
			DATE: August 16, 2017	FIGURE: 2

Figure 3
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 TCE Concentration
Well M2 (Zone 7)**



ft MSL: Elevation in feet with respect to Mean Sea Level

Figure 4
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 TCE Concentration
Well M4 (Zones 4 and 8)**

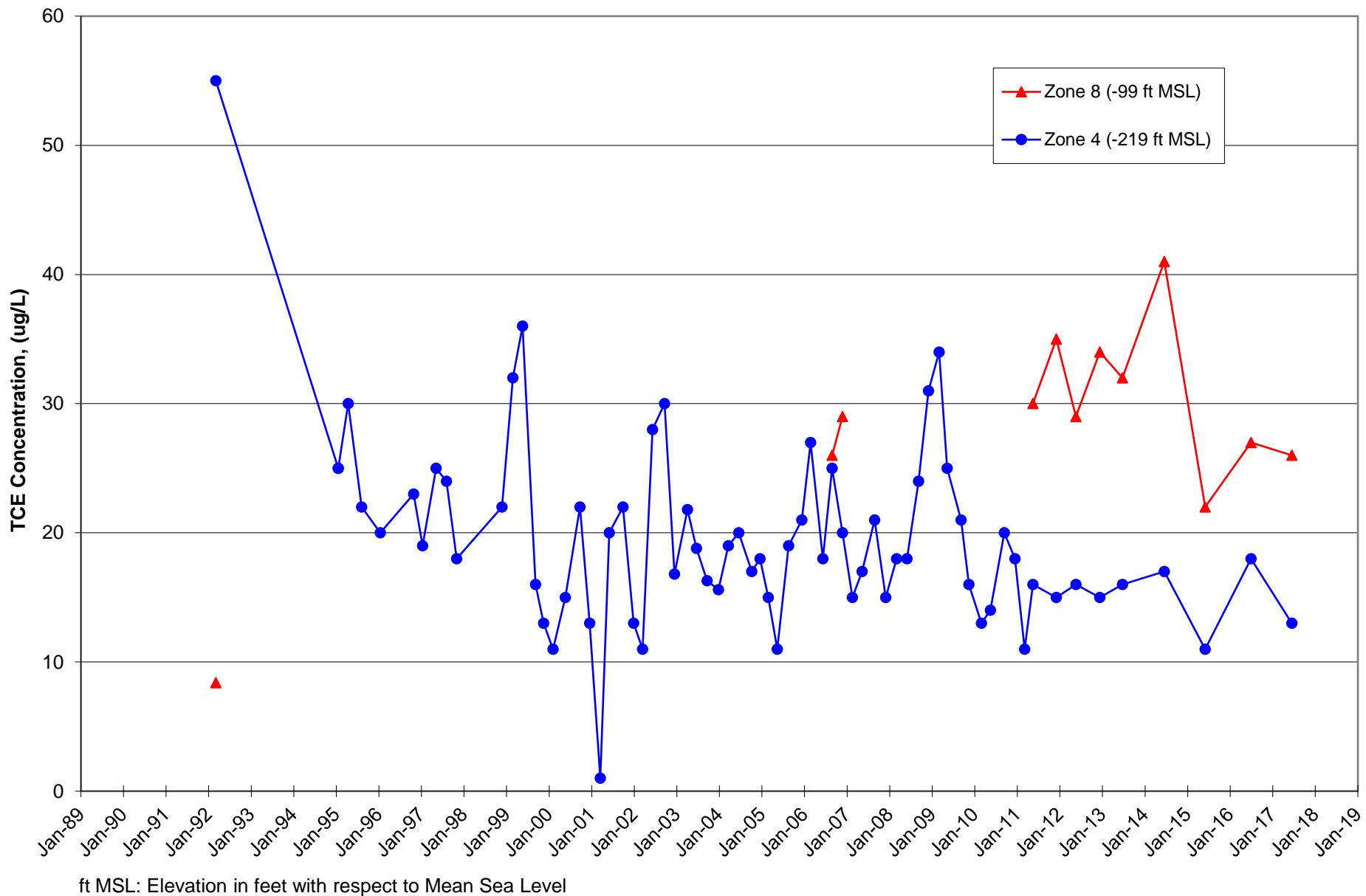


Figure 5
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 TCE Concentration
 Well M5 (Zones 5, 7, and 10)**

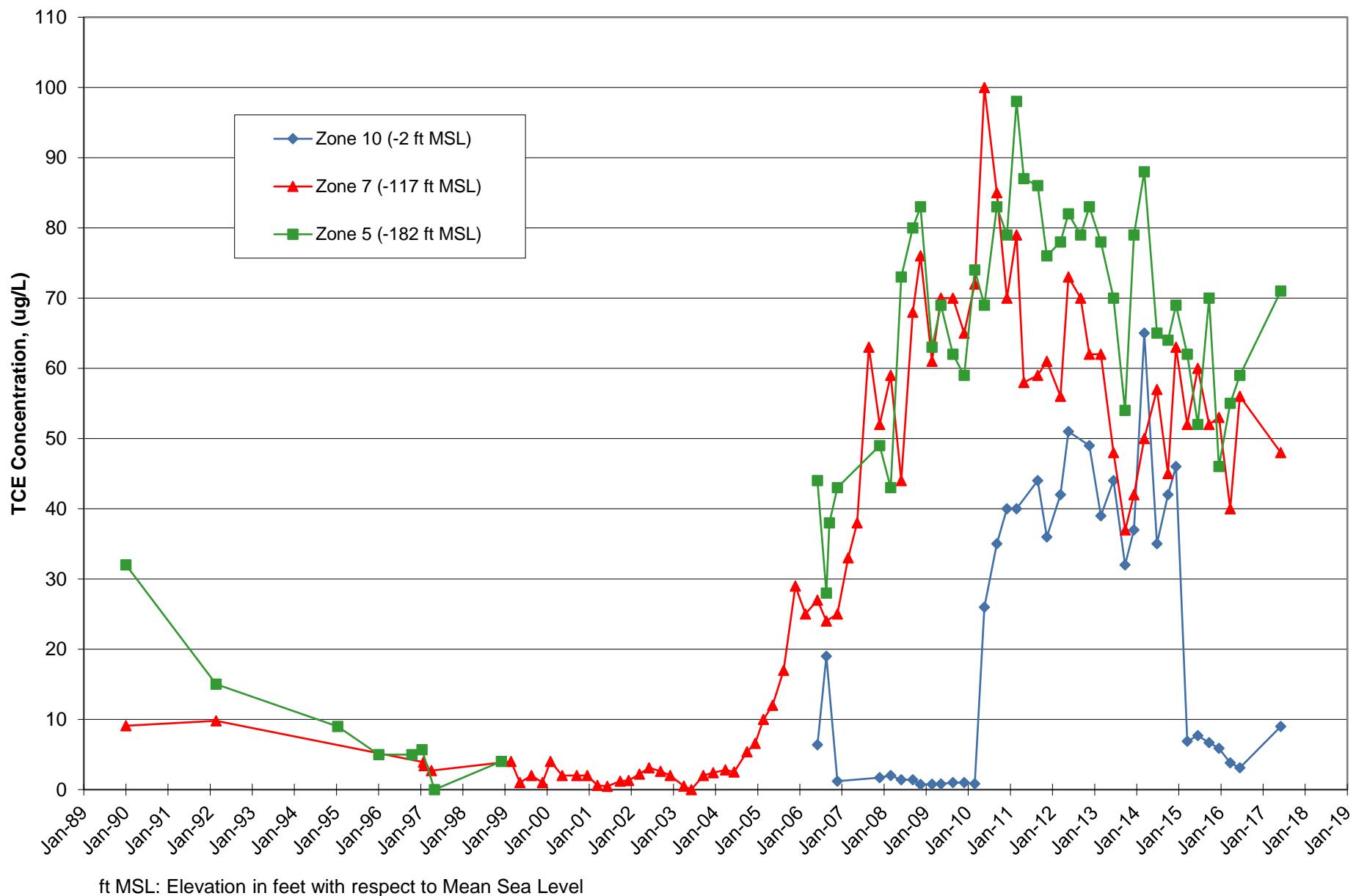


Figure 6
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 TCE Concentration
Well M6 (Zone 6)**

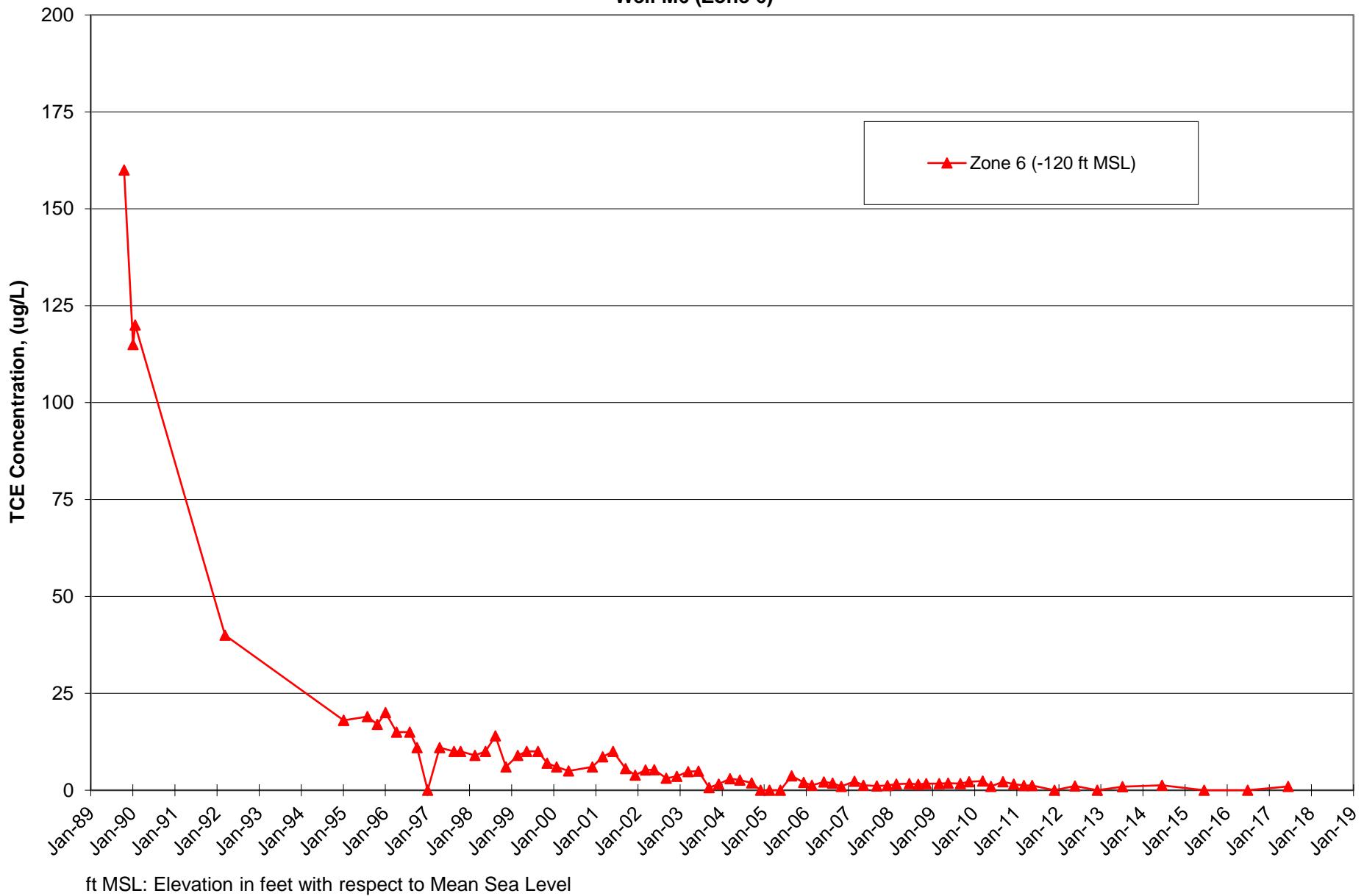


Figure 7
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

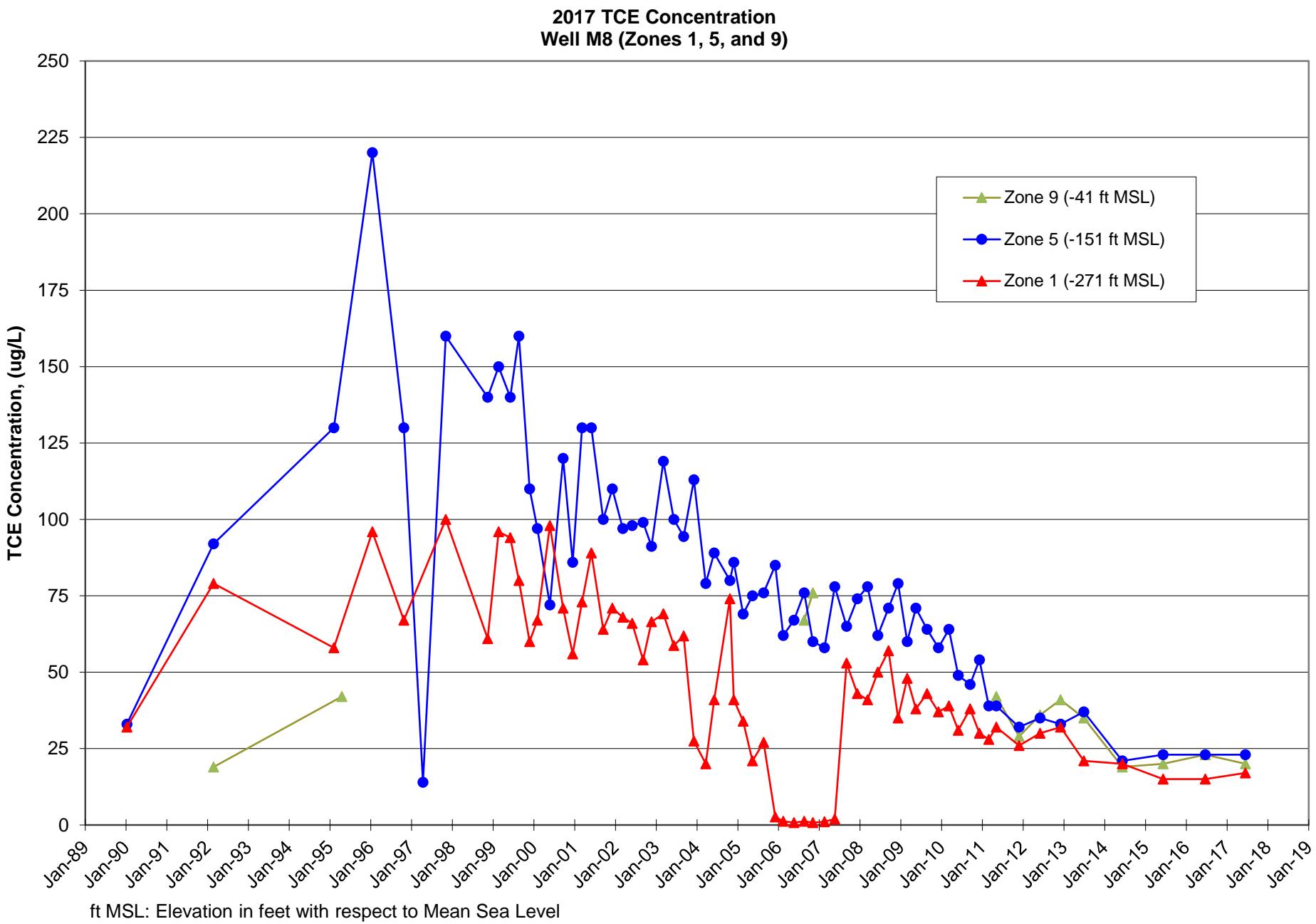


Figure 8
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 TCE Concentration
Well M9 (Zones 3, 5, 7, and 9)**

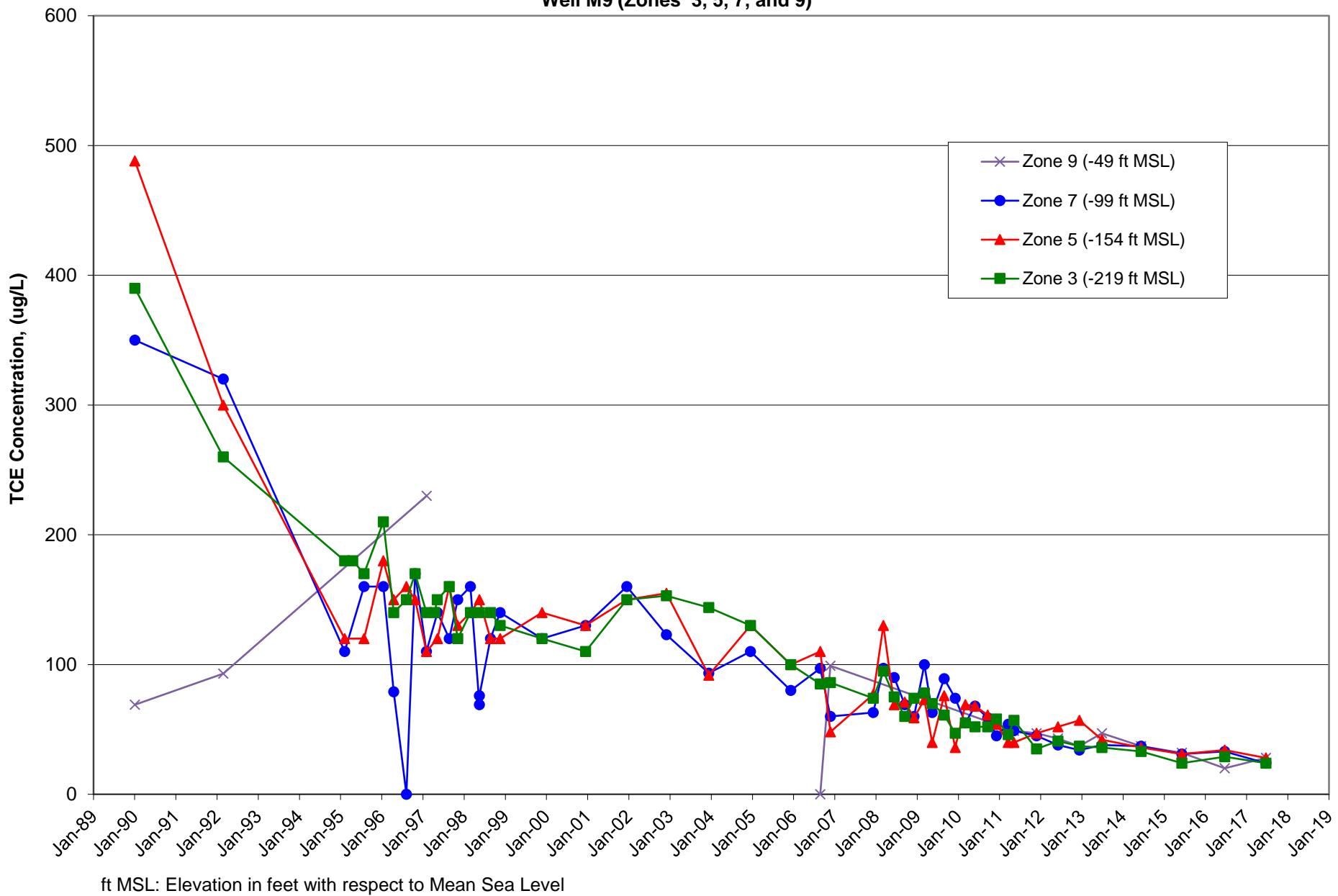


Figure 9
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 TCE Concentration
Well M12 (Zone 6)**

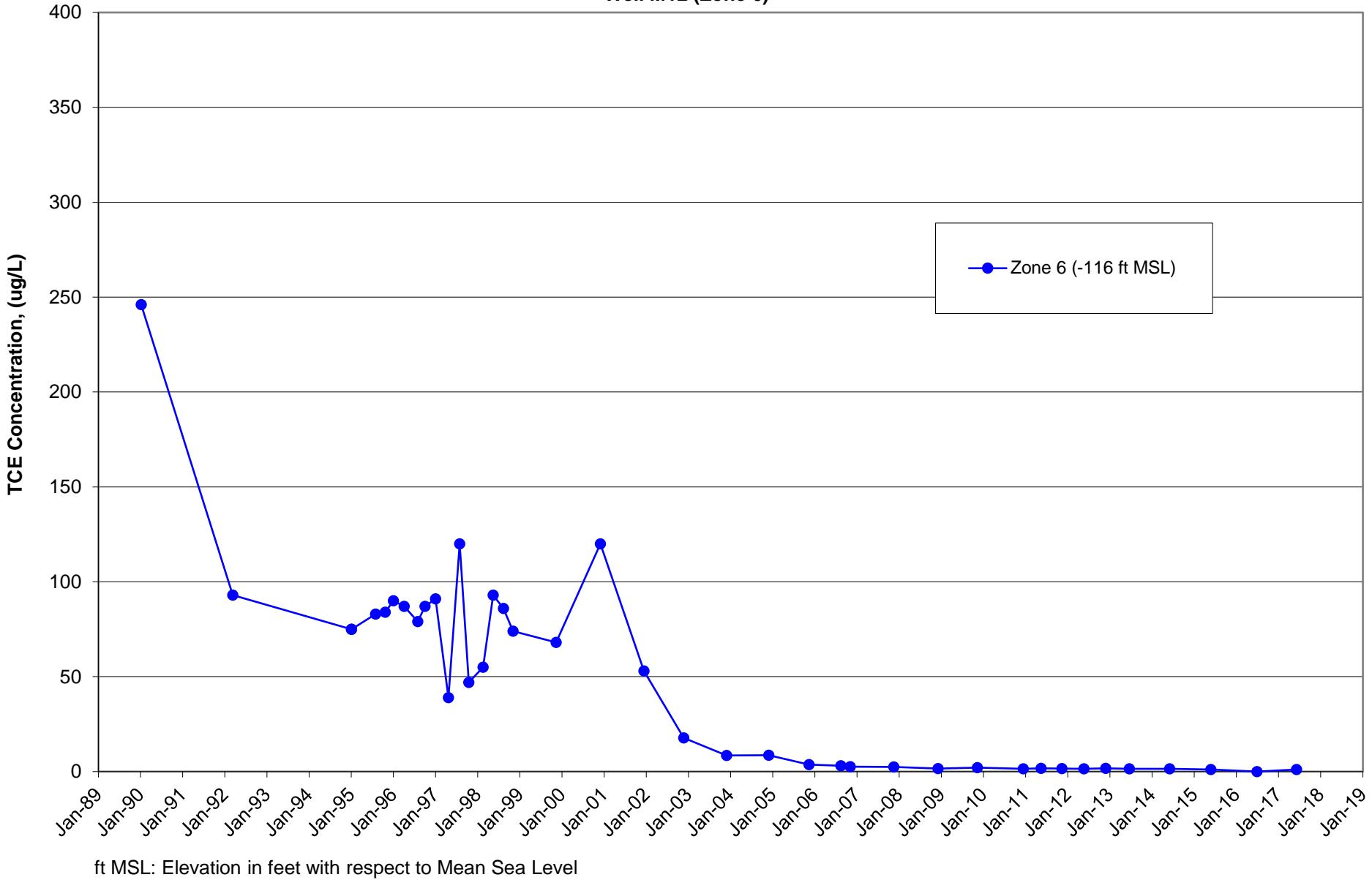


Figure 10
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 TCE Concentration
Well M13 (Zone 8)**

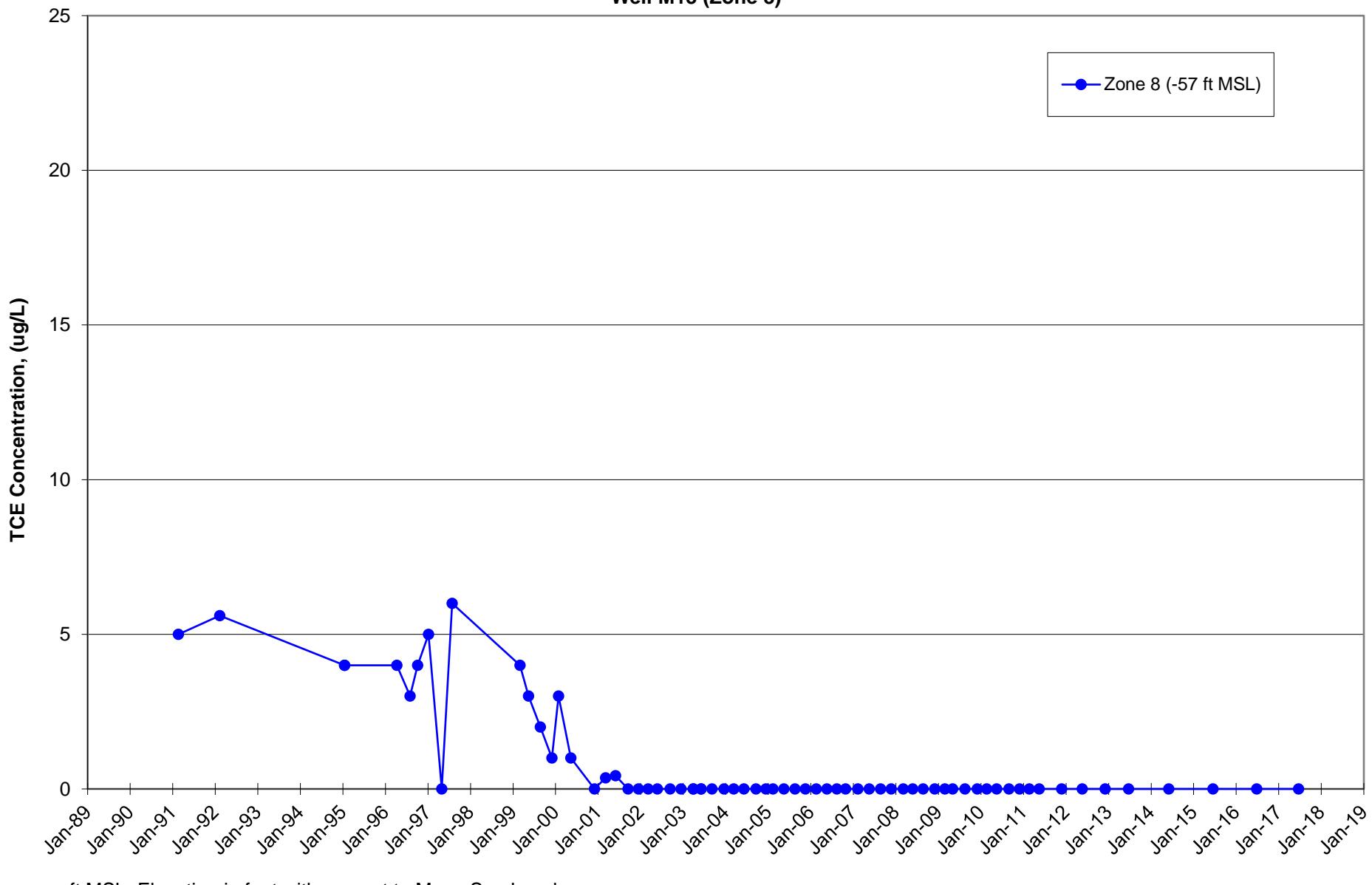


Figure 11
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 TCE Concentration
Well 15 (Zones 6 and 10)**

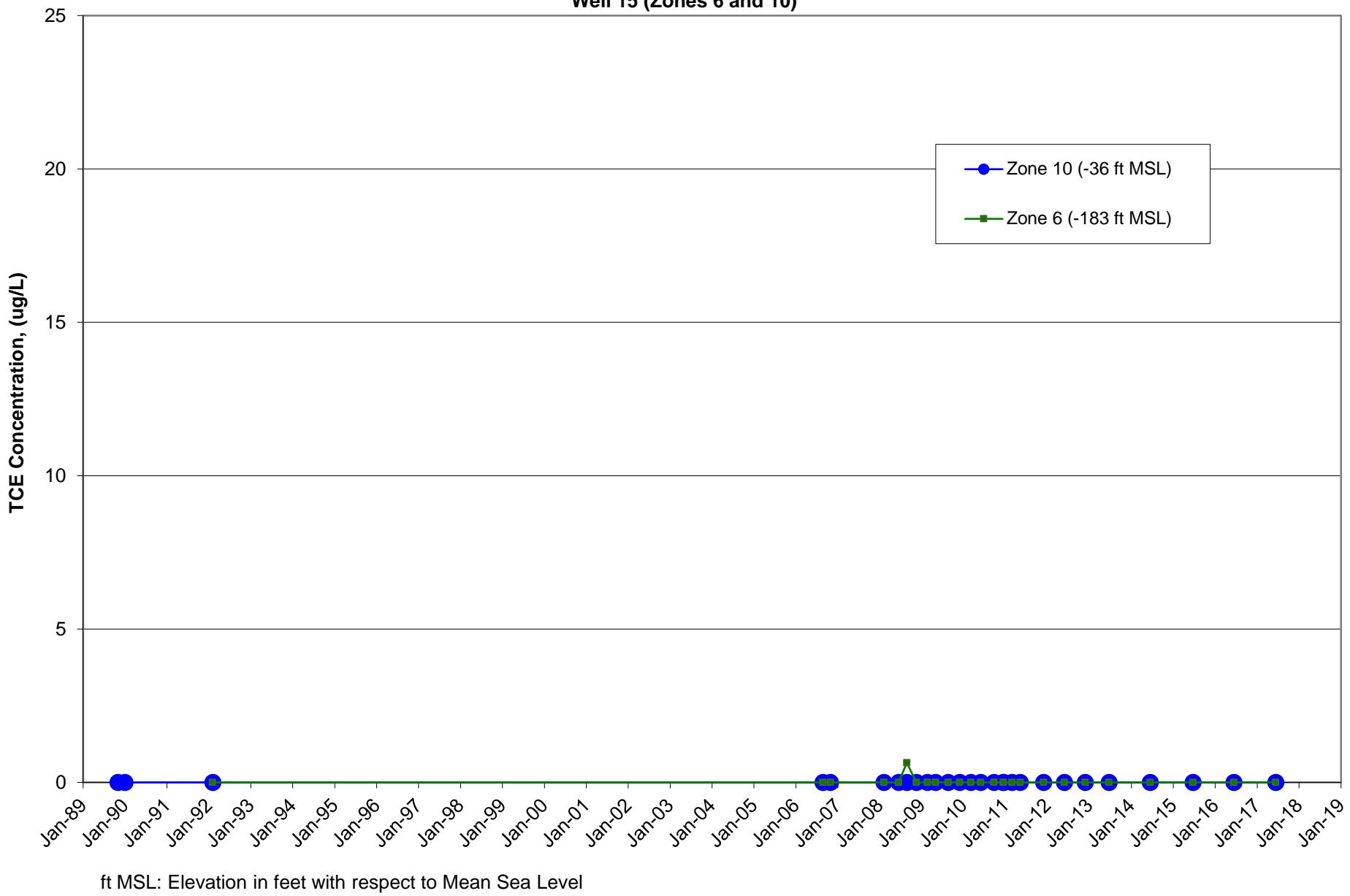


Figure 12
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

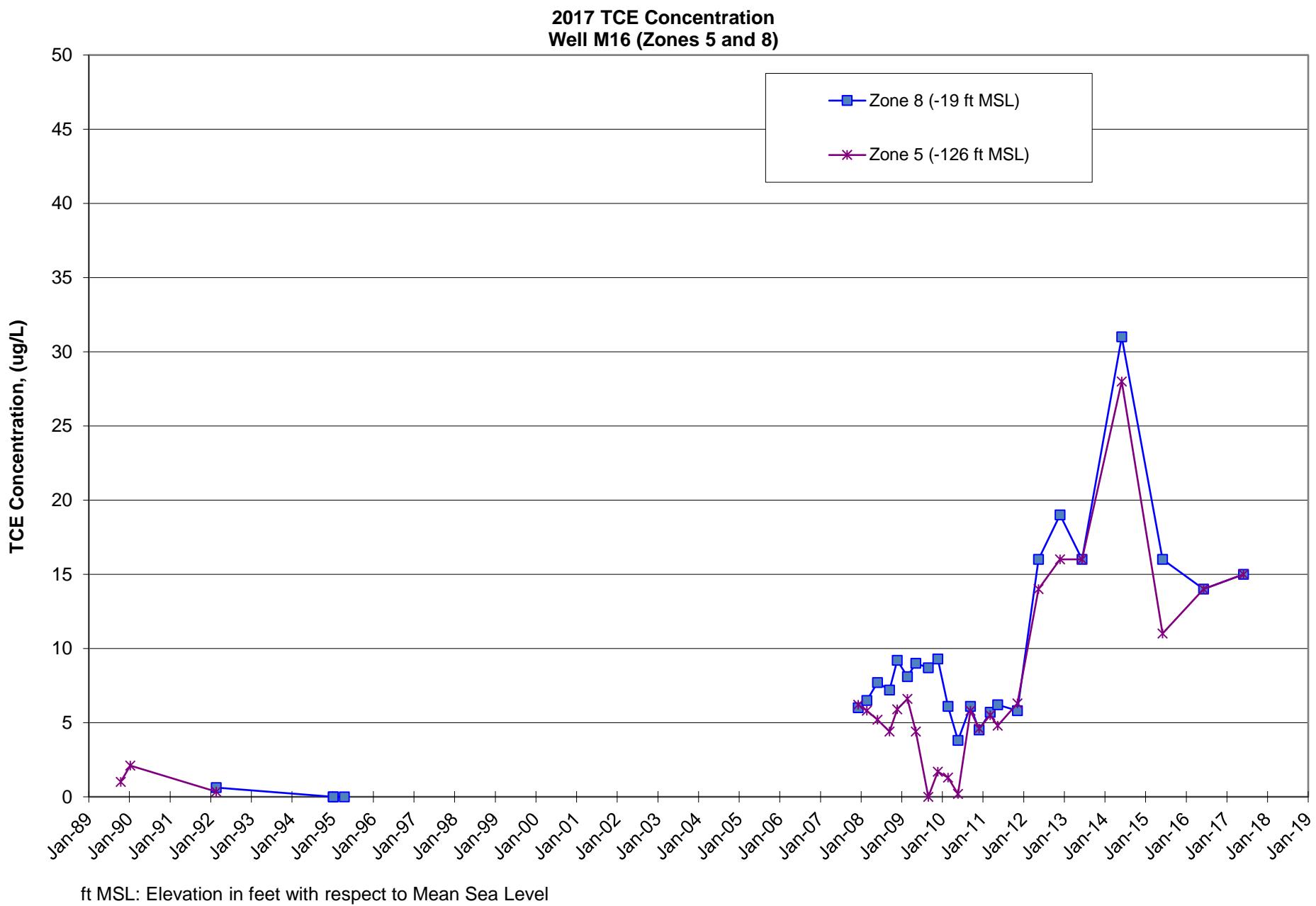


Figure 13
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

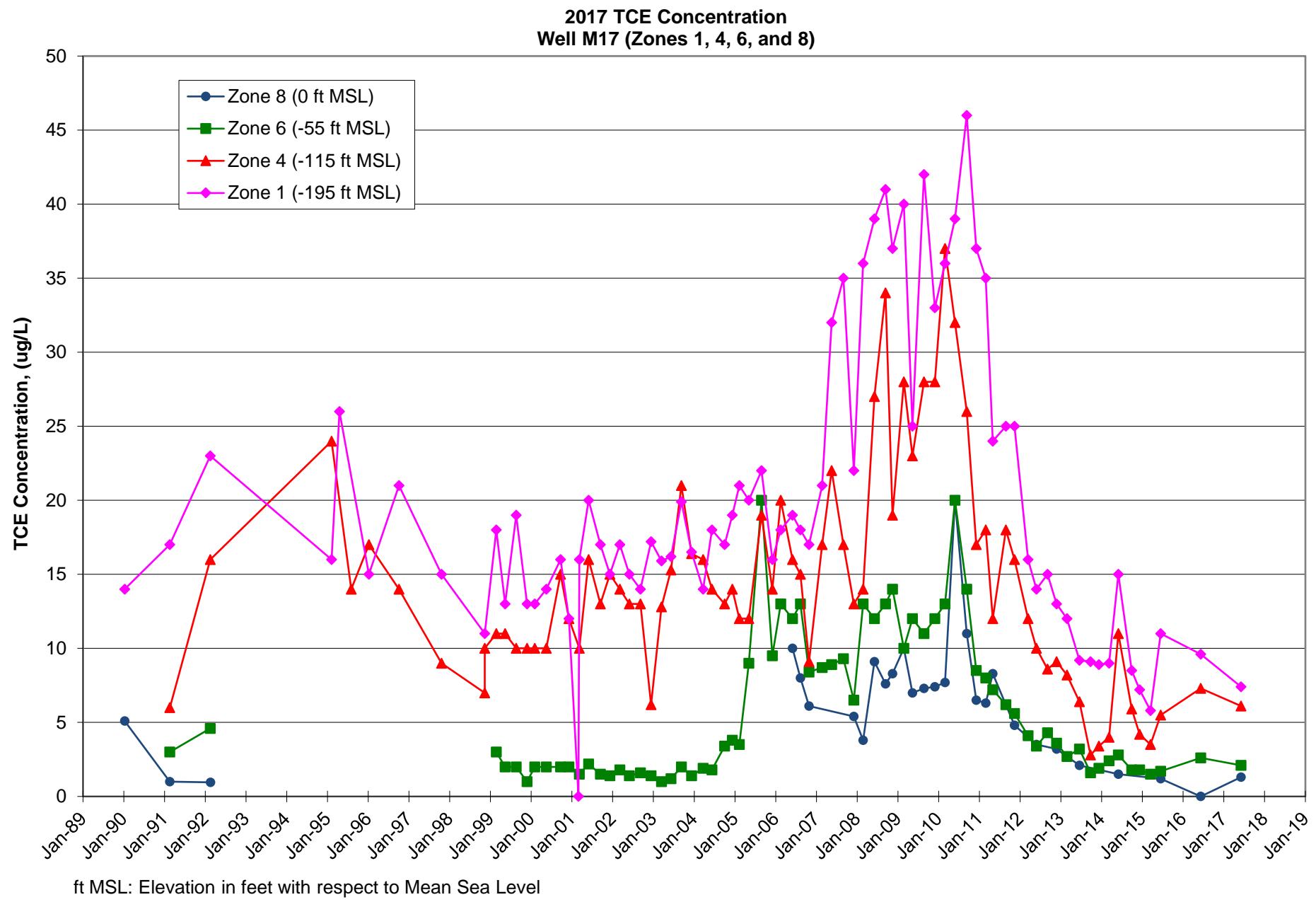


Figure 14
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 TCE Concentration
Well M19 (Zone 6)**

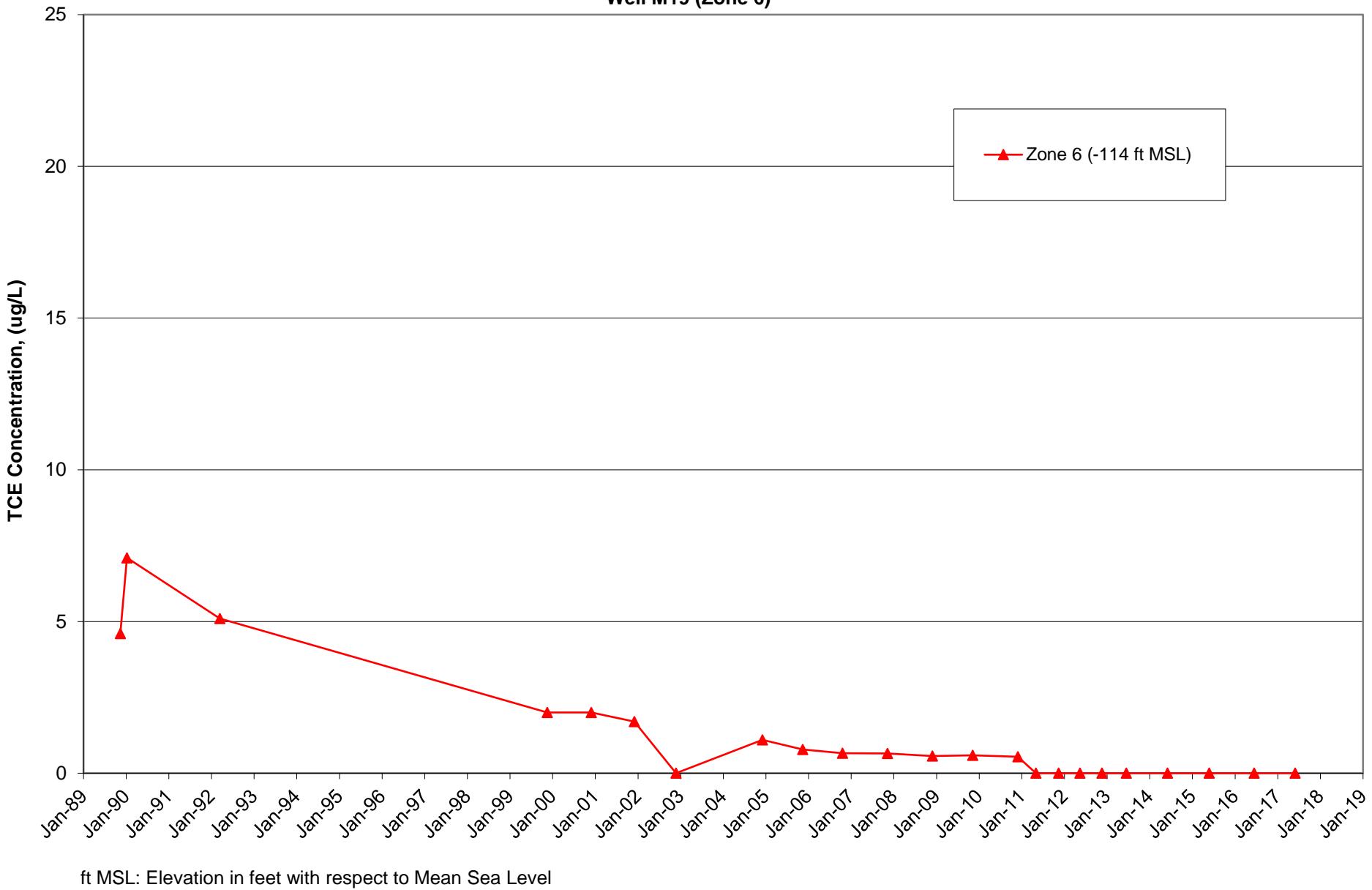


Figure 15
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

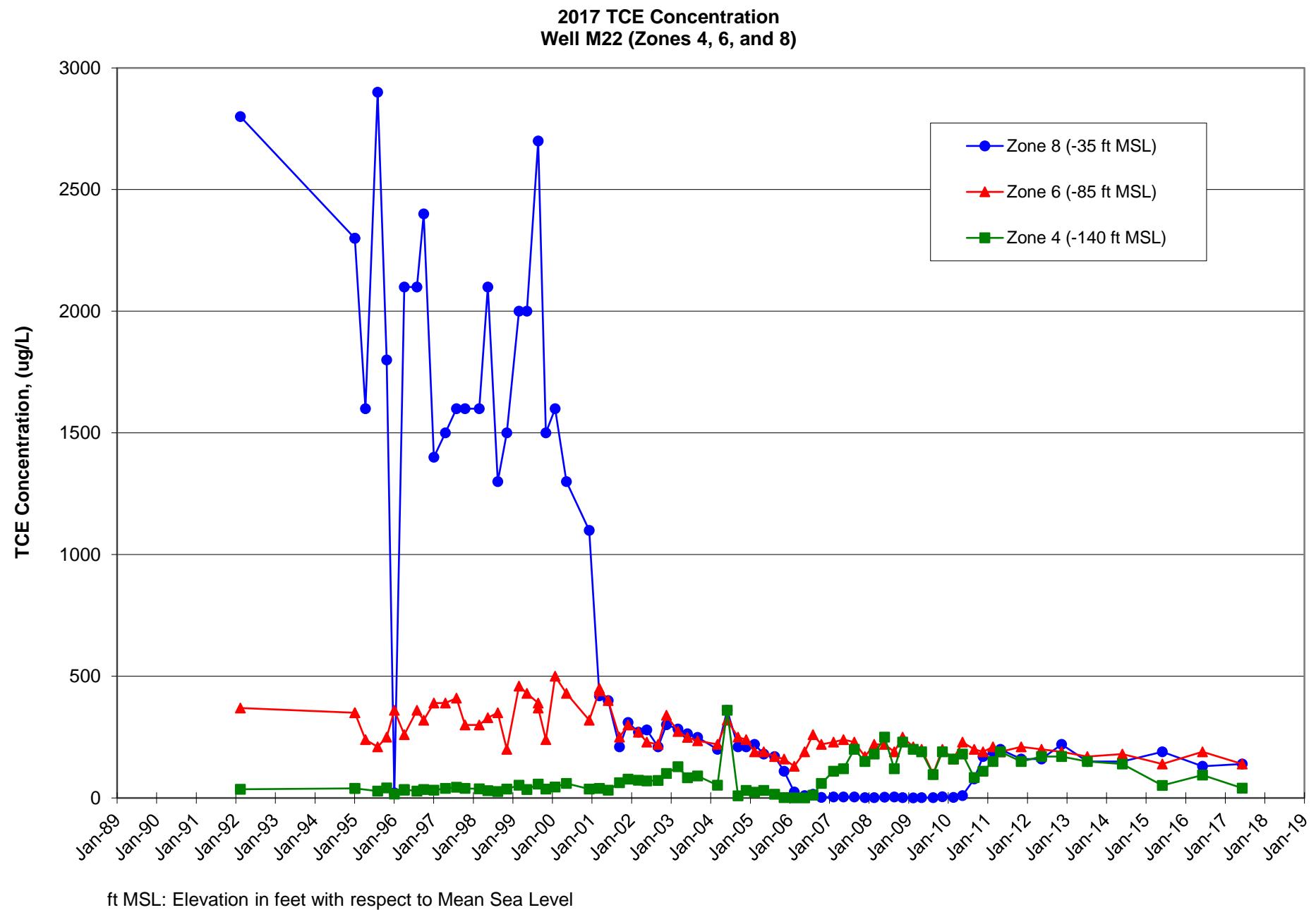


Figure 16
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 Total VOC Concentration
Well M2 (Zone 7)**

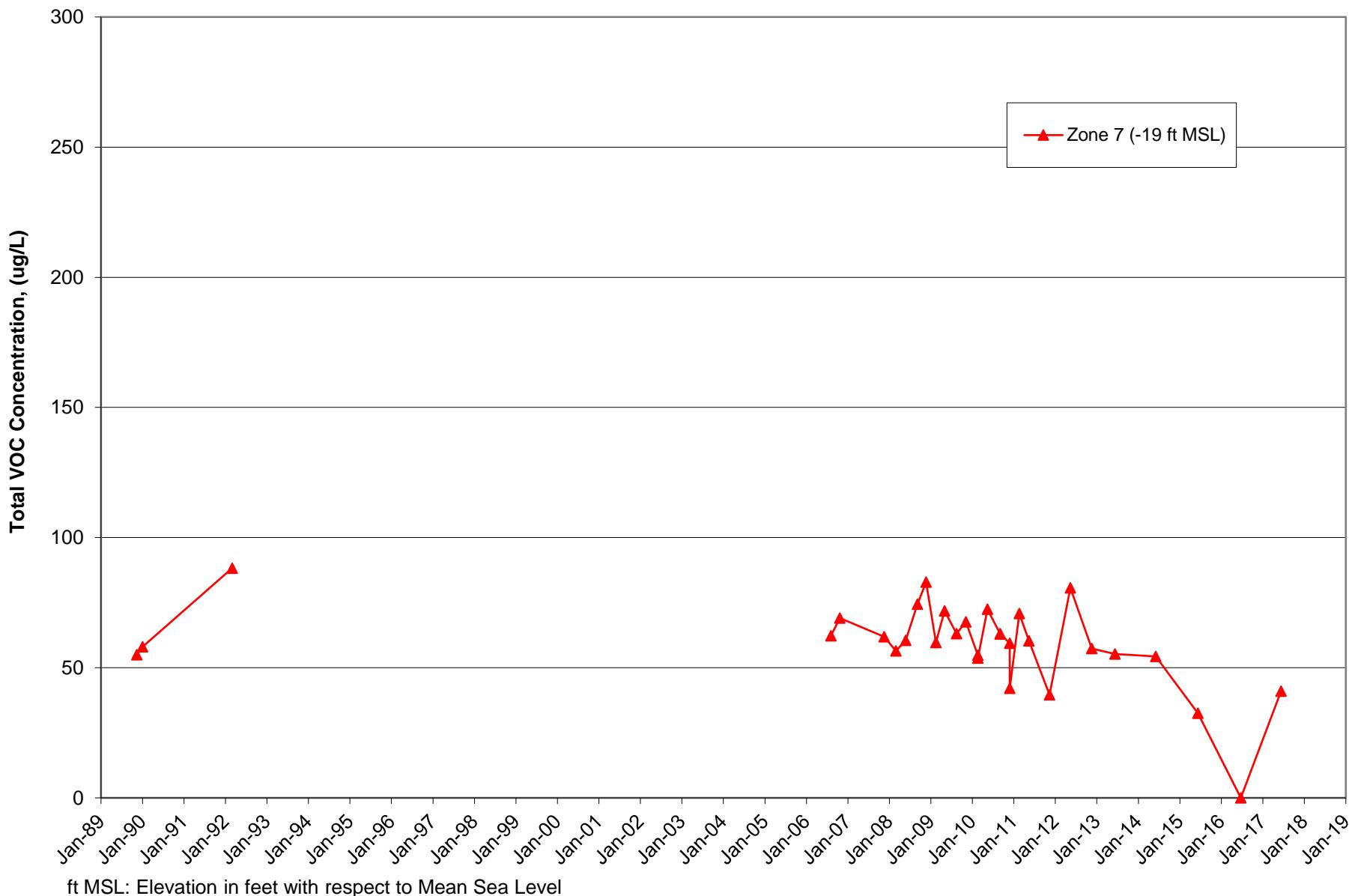
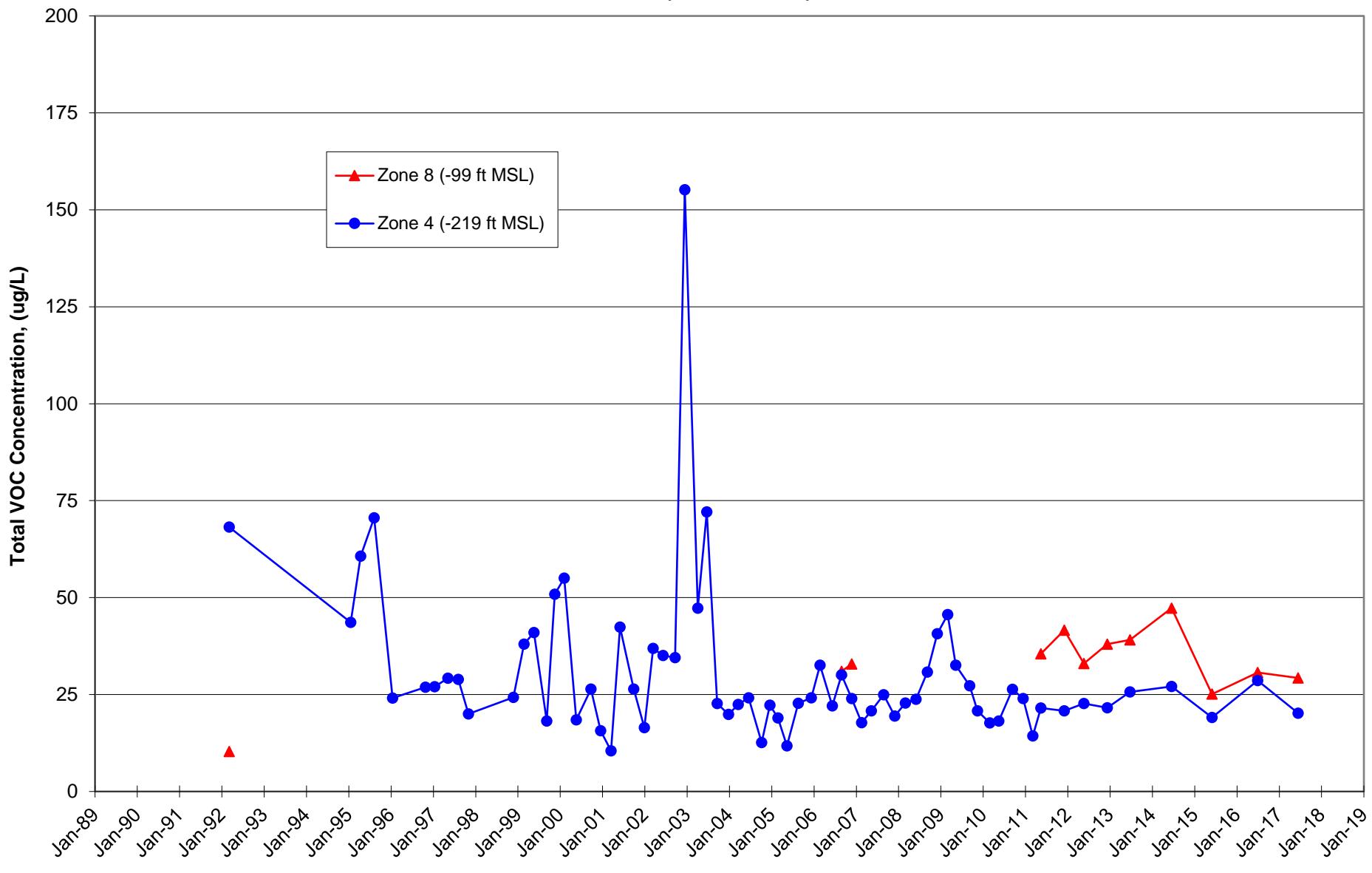


Figure 17
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

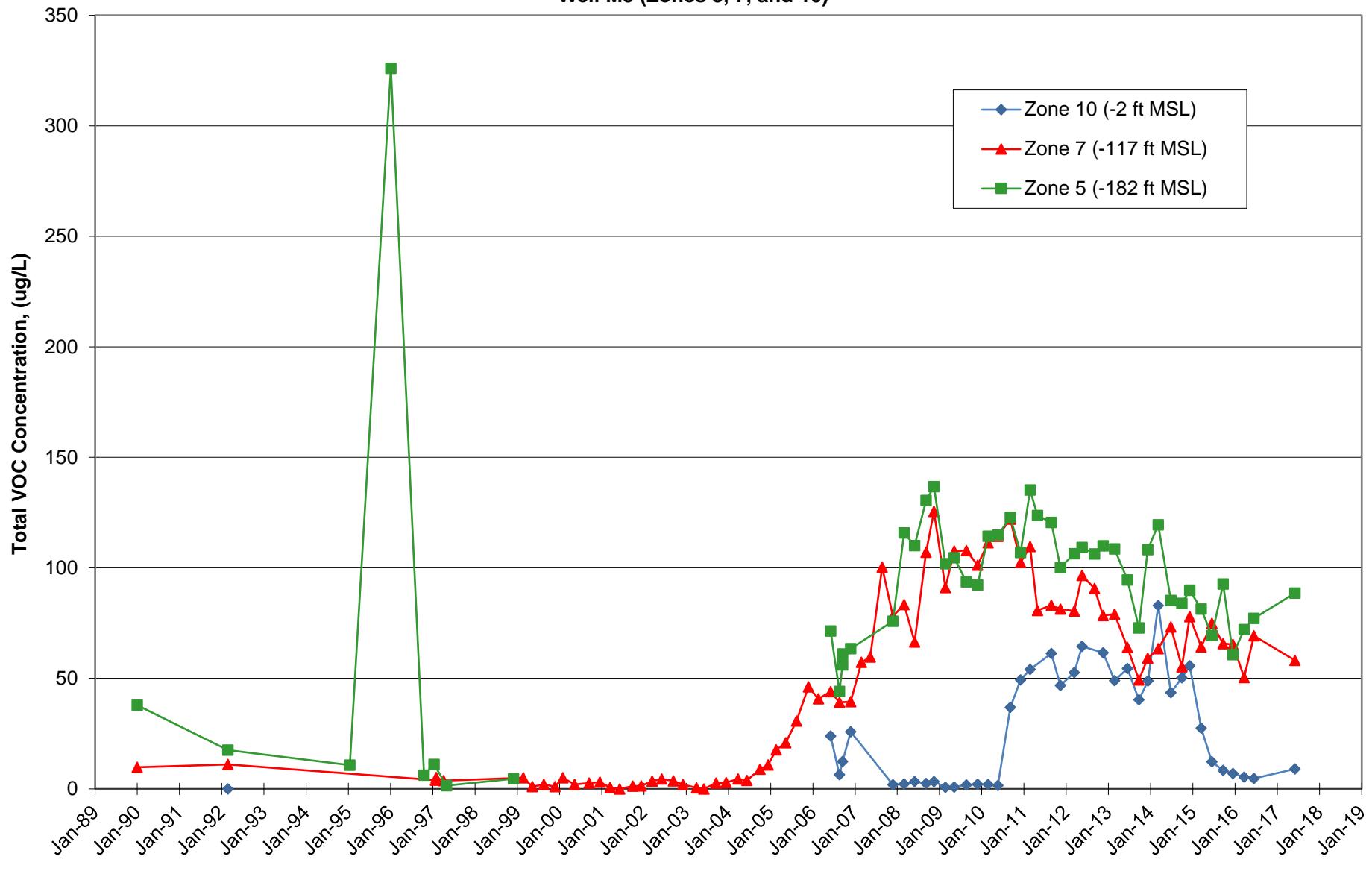
**2017 Total VOC Concentration
Well M4 (Zones 4 and 8)**



ft MSL: Elevation in feet with respect to Mean Sea Level

Figure 18
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 Total VOC Concentration
Well M5 (Zones 5, 7, and 10)**



ft MSL: Elevation in feet with respect to Mean Sea Level

Figure 19
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

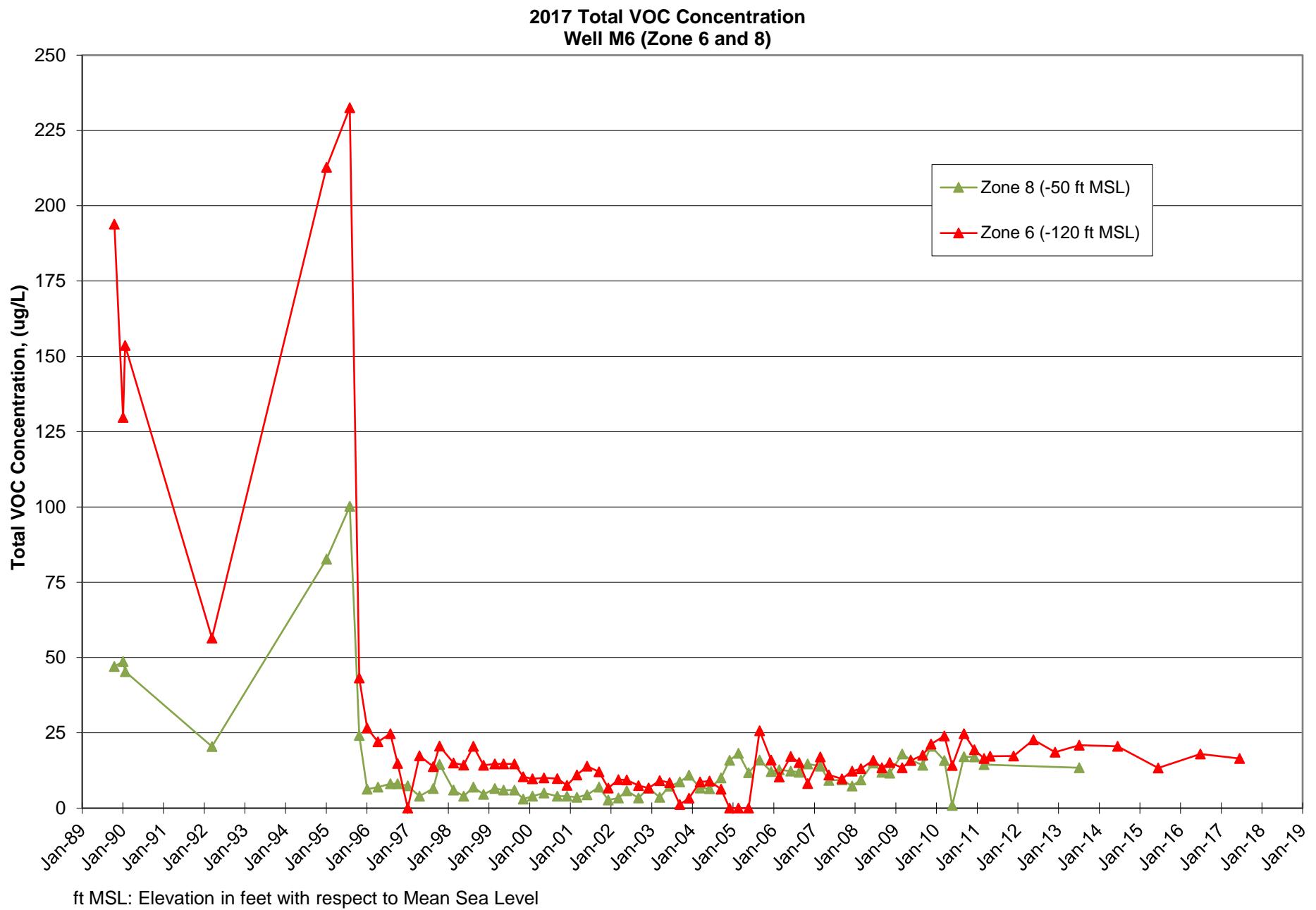


Figure 20
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 Total VOC Concentration
 Well M8 (Zones 1, 5, and 9)**

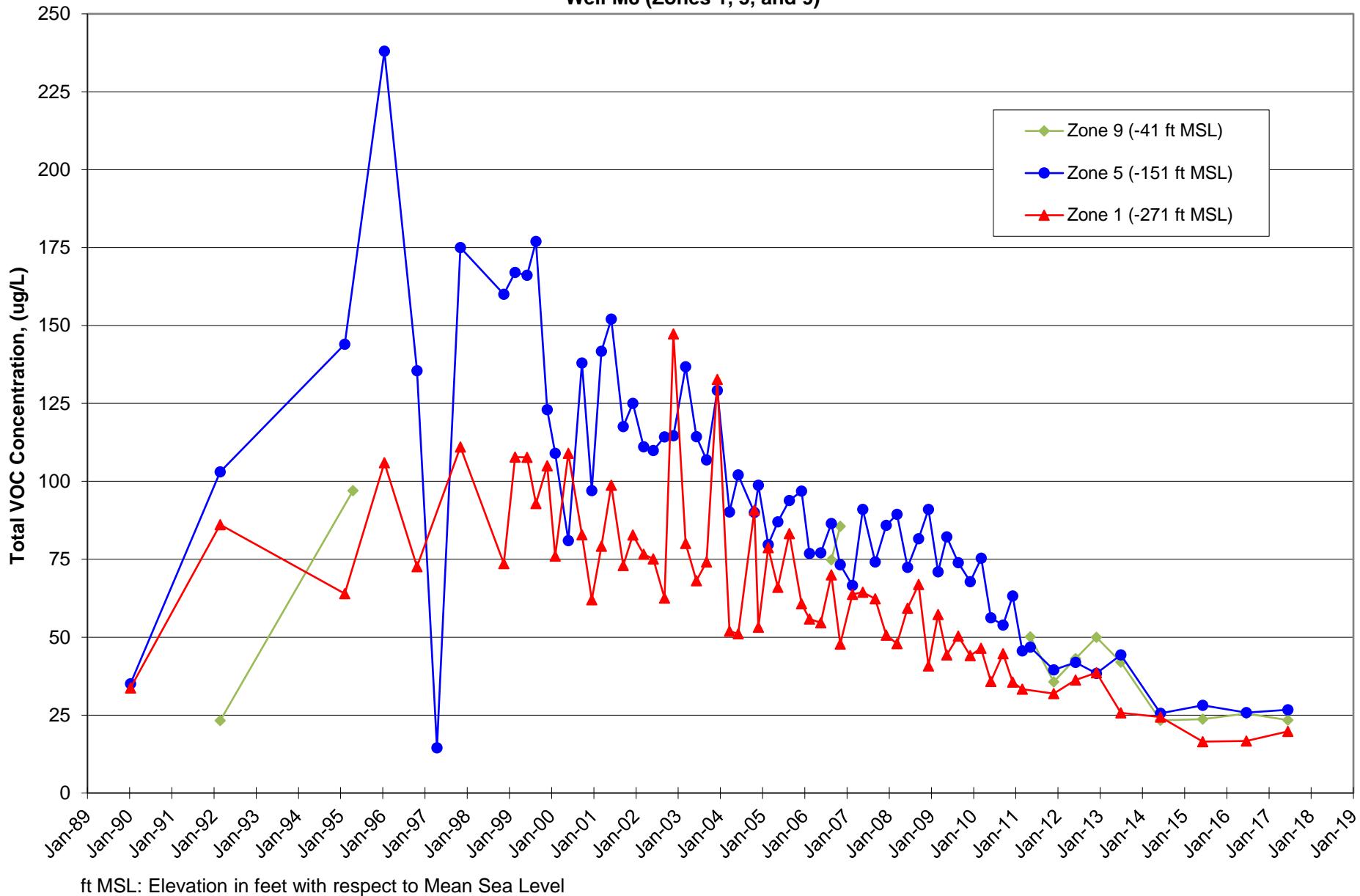


Figure 21
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

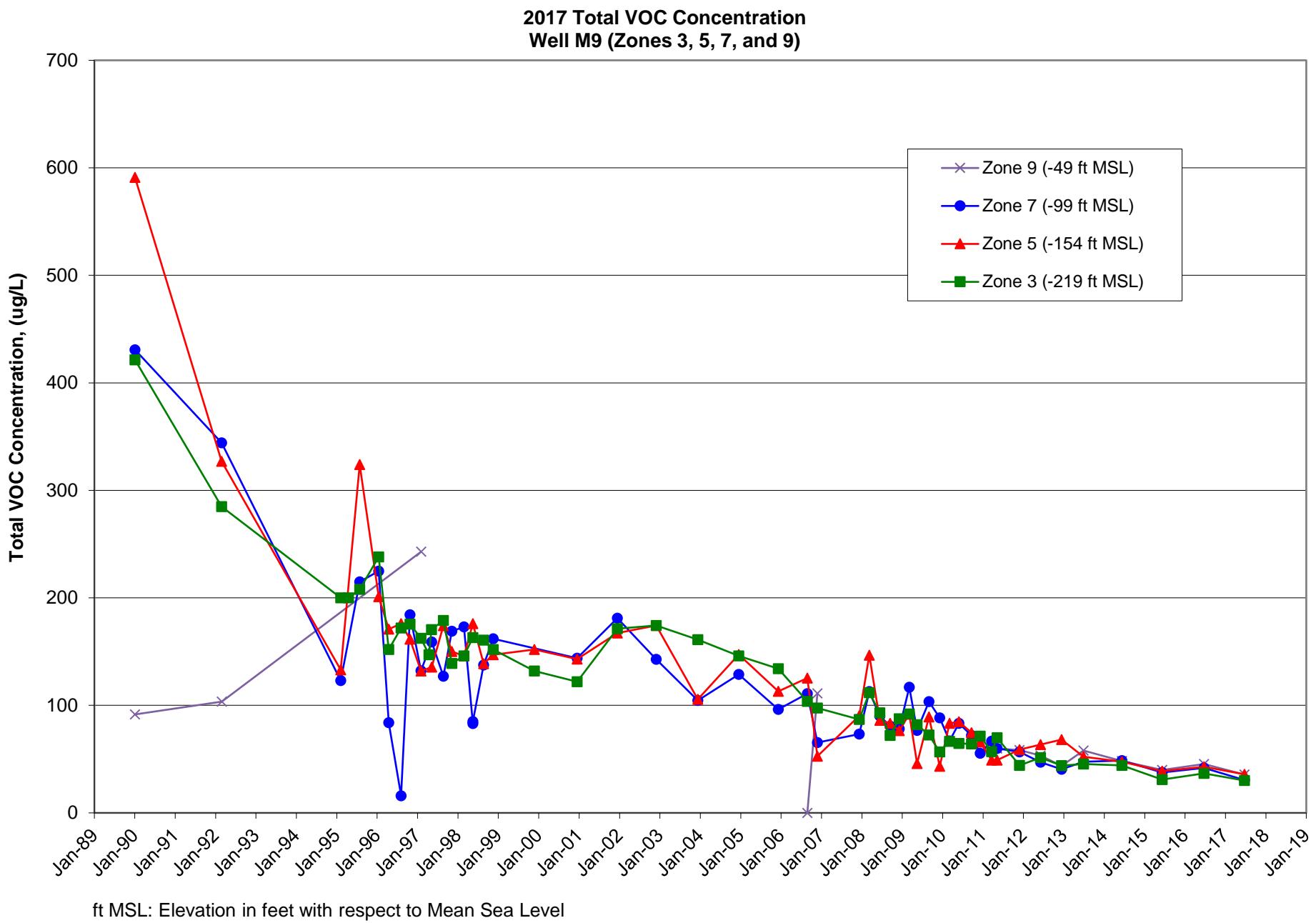


Figure 22
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 Total VOC Concentration
Well M12 (Zone 6)**

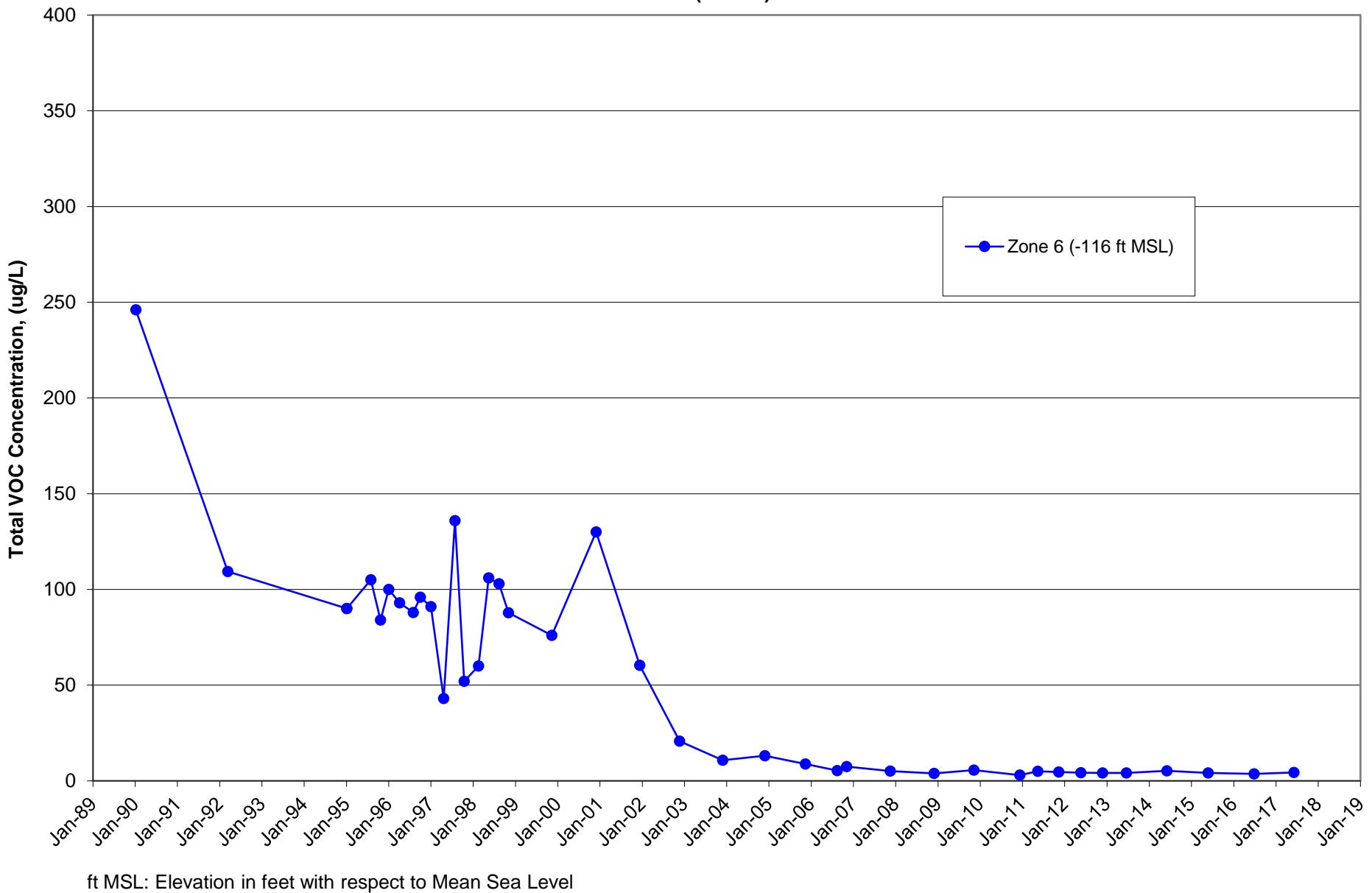


Figure 23
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 Total VOC Concentration
Well M13 (Zone 8)**

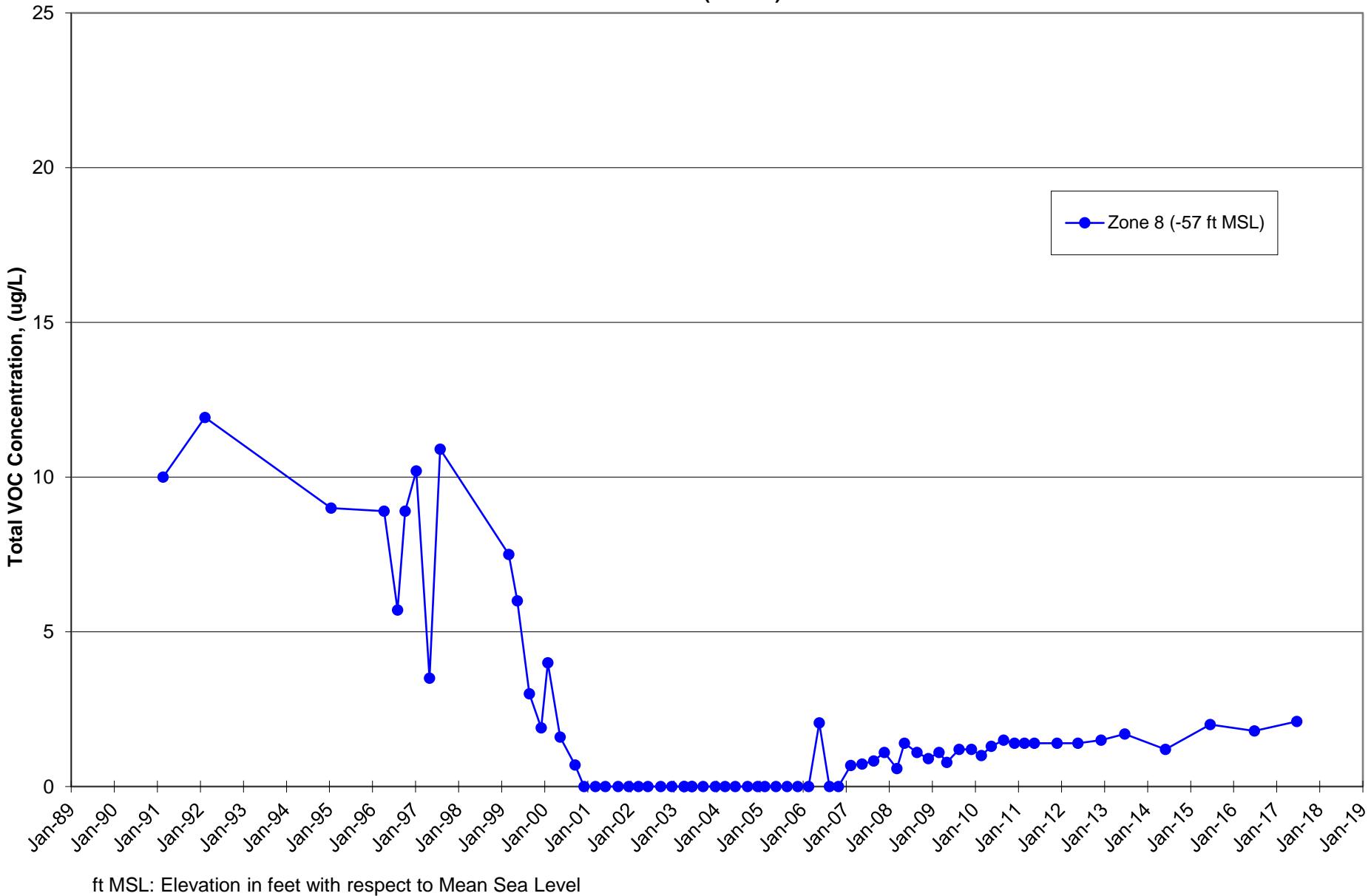


Figure 24
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

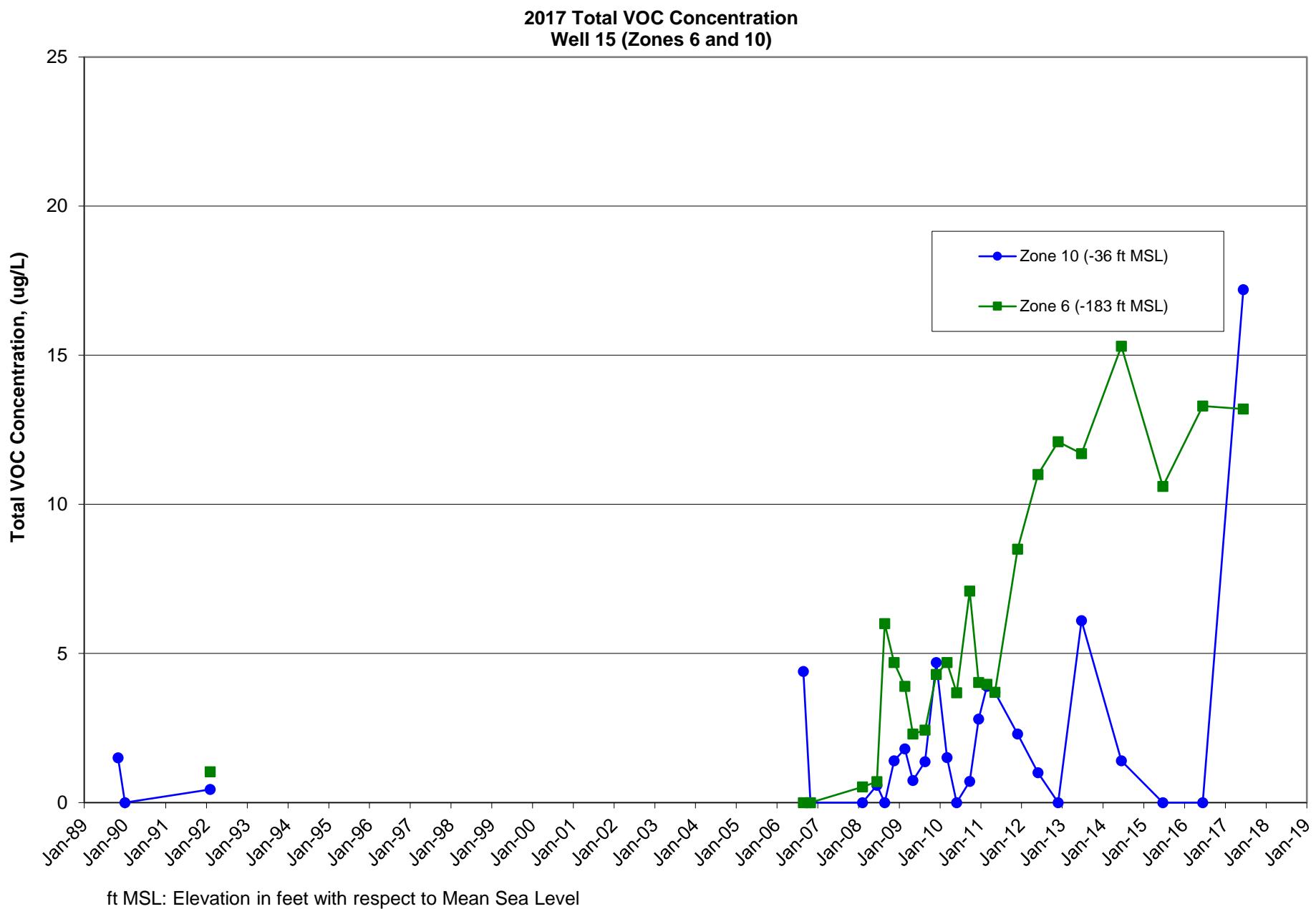
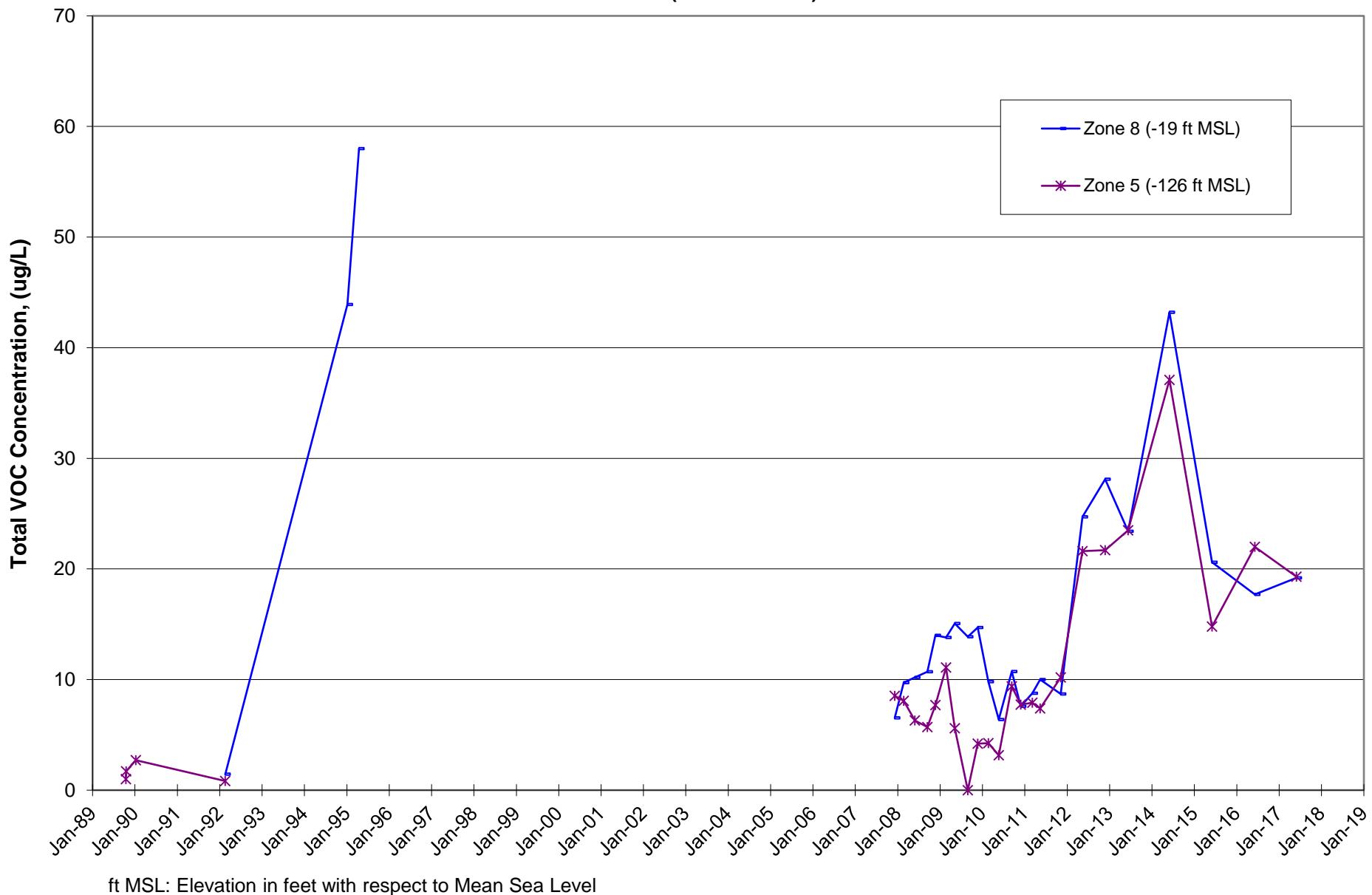


Figure 25
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 Total VOC Concentration
Well M16 (Zones 5 and 8)**



ft MSL: Elevation in feet with respect to Mean Sea Level

Figure 26
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 Total VOC Concentration
 Well M17 (Zones 1, 4, 6, and 8)**

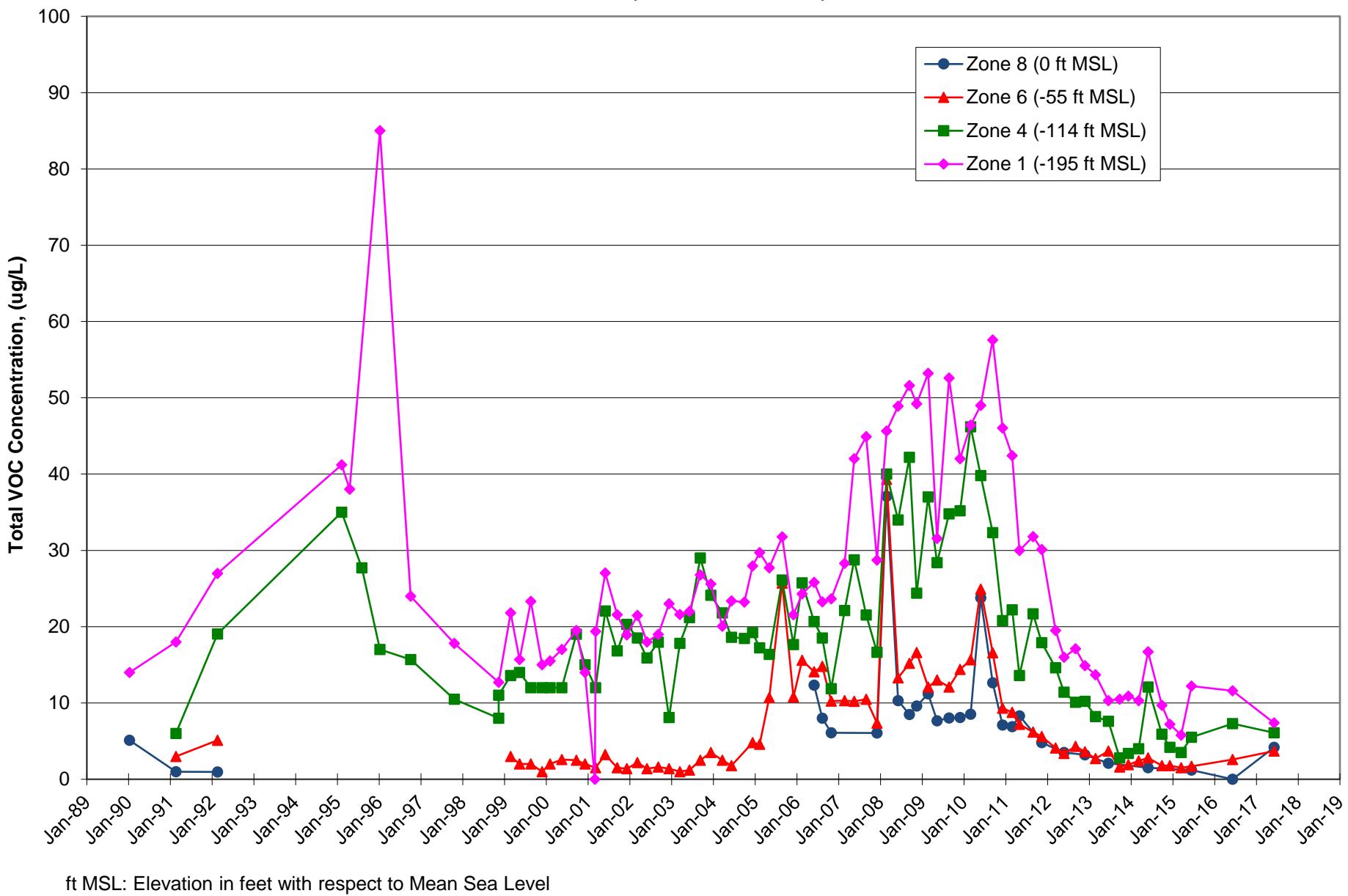


Figure 27
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 Total VOC Concentration
Well M19 (Zone 6)**

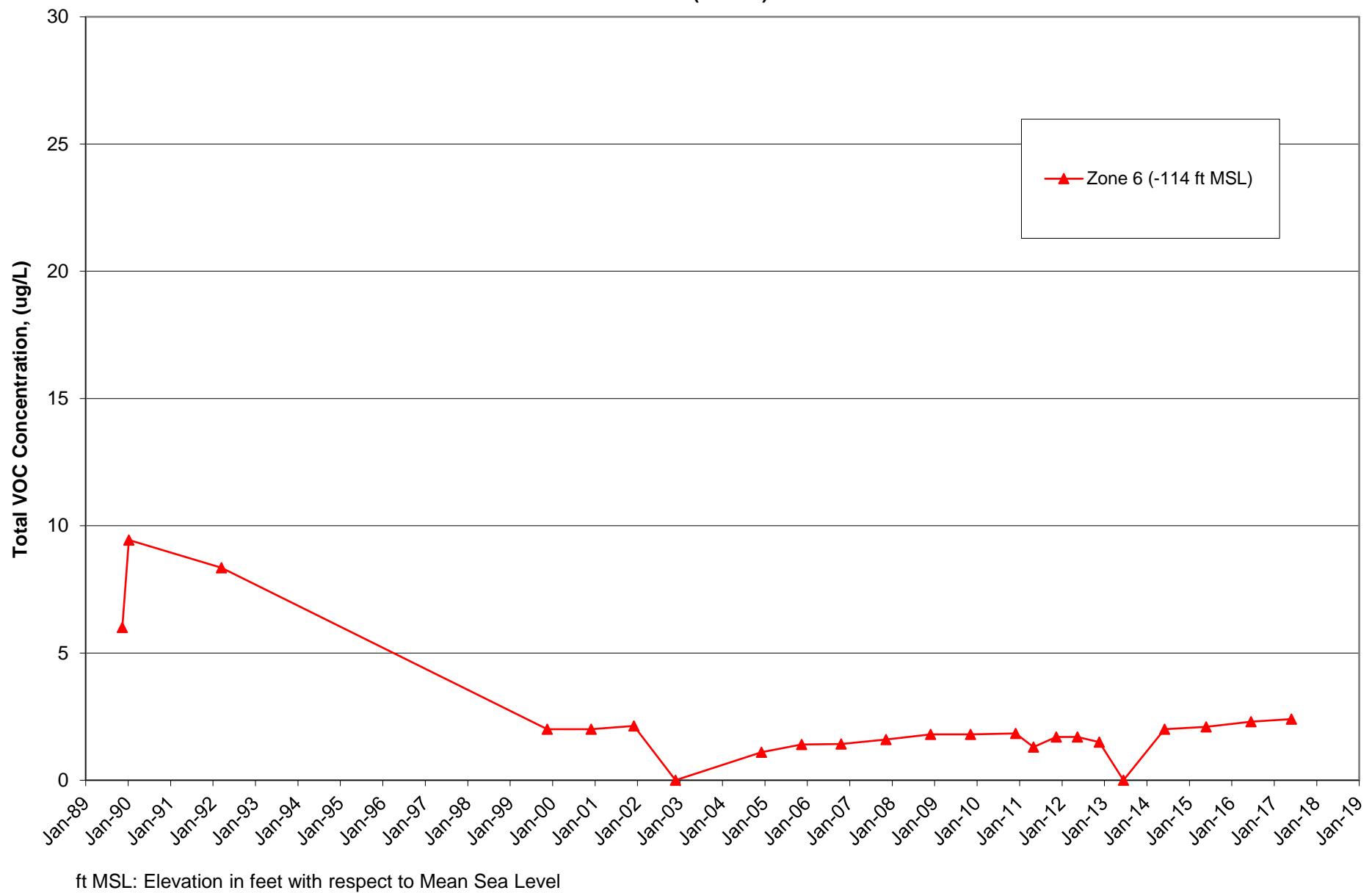
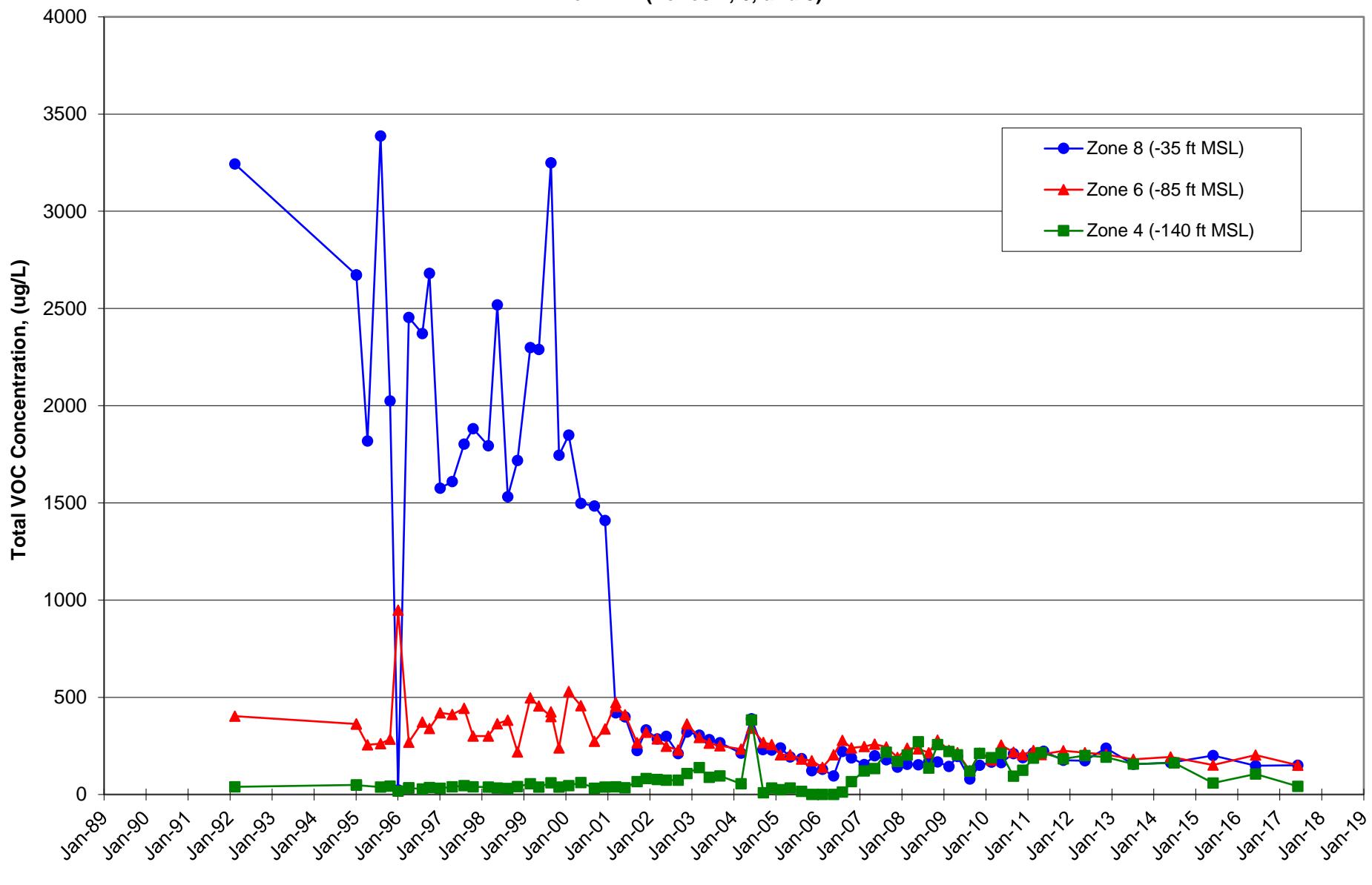


Figure 28
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

**2017 Total VOC Concentration
Well M22 (Zones 4, 6, and 8)**



ft MSL: Elevation in feet with respect to Mean Sea Level

**APPENDIX A
CHAIN OF CUSTODY RECORDS**

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE <i>VA Public Supply Wells</i>				PROJECT NO. 68010783	PROJECT LOCATION (STATE) PR	MATRIX TYPE	REQUIRED ANALYSIS								PAGE 1 OF 1	
TAL (LAB) PROJECT MANAGER <i>Jerry Larier</i>				P.O. NUMBER	CONTRACT NO.										STANDARD REPORT DELIVERY <input checked="" type="checkbox"/>	
CLIENT (SITE) # <i>PM 787-014-2254</i>				CLIENT PHONE <i>610-648-2208</i>	CLIENT FAX <i>651-635-3614</i>										DATE DUE _____	
CLIENT NAME <i>Miguel Cedeno</i>				CLIENT E-MAIL <i>Martin.Hause@uiisup.com</i>											EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="checkbox"/>	
CLIENT ADDRESS <i>2476 Bredesford Road Malvern PA 19355</i>				COMPANY CONTRACTING THIS WORK (if applicable) <i>Uiisup/VASC</i>								DATE DUE _____				
												NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1				
SAMPLE	SAMPLE IDENTIFICATION			COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMI-SOLID	AIR	NUMBER OF CONTAINERS SUBMITTED								REMARKS
DATE	TIME							3	3	3	3	3	3	3	3	<i>Samples correspond to Vega Atta Annual sampling 2017</i>
5-31-17	1009	<i>M19Z6</i>			G ✓			3	3	3	3	3	3	3	3	<i>All trip black vials have air bubbles.</i>
—	—	<i>TB053117 Ret 04/31/17</i>			G ✓			3	3	3	3	3	3	3	3	
6-01-17	0905	<i>M7Z1</i>			G ✓			3	3	3	3	3	3	3	3	
6-01-17	1011	<i>M16Z5</i>			G ✓			3	3	3	3	3	3	3	3	
6-01-17	1057	<i>M16Z8</i>			G ✓			3	3	3	3	3	3	3	3	
—	—	<i>TB060117 Ret 04/31/17</i>			G ✓			3	3	3	3	3	3	3	3	
RELINQUISHED BY: (SIGNATURE) <i>MI Partida</i>			DATE 6-01-17	TIME 1140	RELINQUISHED BY: (SIGNATURE)			DATE	TIME	RELINQUISHED BY: (SIGNATURE)			DATE	TIME		
RECEIVED BY: (SIGNATURE)			DATE	TIME	RECEIVED BY: (SIGNATURE)			DATE	TIME	RECEIVED BY: (SIGNATURE)			DATE	TIME		
LABORATORY USE ONLY																
RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>N</i>		DATE 6-2-17	TIME 915	CUSTODY INTACT YES <input type="radio"/> NO <input checked="" type="radio"/>	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS 1-2/05									

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE <i>VA Public Supply Wells</i>	PROJECT NO. <i>68010783</i>	PROJECT LOCATION (STATE) <i>PR</i>	MATRIX TYPE	REQUIRED ANALYSIS								PAGE 1	OF 1		
TAL (LAB) PROJECT MANAGER <i>Jerry Lauer</i>	P.O. NUMBER	CONTRACT NO.										STANDARD REPORT DELIVERY <input checked="" type="checkbox"/>			
CLIENT SITE PM <i>787-614-2257</i> <i>Miguel Cedeno</i>	CLIENT PHONE <i>610-648-2208</i>	CLIENT FAX <i>651-635-3617</i>										DATE DUE _____			
CLIENT NAME <i>Martin Howe</i>	CLIENT E-MAIL <i>Martin.Howe@Umisip.com</i>											EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="checkbox"/>			
CLIENT ADDRESS <i>2476 Swedesford Road Malvern, PA 19355</i>												DATE DUE _____			
COMPANY CONTRACTING THIS WORK (if applicable) <i>Umisip/VASC</i>														NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1	

Page 25 of 27

SAMPLE	SAMPLE IDENTIFICATION			NUMBER OF CONTAINERS SUBMITTED								REMARKS							
DATE	TIME				AMBIENT/INDOOR (AIR)	AMBIENT/WATER	SOLID OR SEMI-SOLID	AIR	AMBIENT/OUTDOOR (OIL, SOLVENT, ...)	COMPOSITE (OR GRAB) INDICATE	AMBIENT/WATER	SOLID OR SEMI-SOLID	AIR	AMBIENT/OUTDOOR (OIL, SOLVENT, ...)	COMPOSITE (OR GRAB) INDICATE	AMBIENT/WATER	SOLID OR SEMI-SOLID	AIR	
—	—	TB060517	lot 041317	*	6✓	6✓	3	3											
6-05-17	1045	M525			6✓	6✓	3	3											
6-05-17	1128	M527			6✓	6✓	3	3											
6-05-17	1217	M5210			6✓	6✓	3	3											
6-05-17	1405	M2729			6✓	6✓	3	3											
—	—	TB060617	lot 041317	*	6✓	6✓	3	3											
6-06-17	1004	M1721			6✓	6✓	3	3											
6-06-17	1048	M1724			6✓	6✓	3	3											
6-06-17	1128	M1726			6✓	6✓	3	3											
6-06-17	1212	M1728			6✓	6✓	3	3											



680-139603 Chain of Custody

RELINQUISHED BY: (SIGNATURE) <i>M. P. Patelka</i>	DATE <i>6-6-17</i>	TIME <i>1355</i>	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>H</i>	DATE <i>6-7-17</i>	TIME <i>940</i>	CUSTODY INTACT YES <input type="radio"/> NO <input checked="" type="radio"/>	CUSTODY SEAL NO.	SAVANNAH LOG NO. <i>C</i>	LABORATORY REMARKS <i>4-033</i>											
---	-----------------------	--------------------	--	------------------	------------------------------	------------------------------------	--	--	--	--	--	--	--	--	--	--	--

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE <i>VA Public Supply Well 68010783</i>	PROJECT NO. <i>68010783</i>	PROJECT LOCATION (STATE) <i>PA</i>	MATRIX TYPE	REQUIRED ANALYSIS								PAGE / <i>1</i>	OF / <i>1</i>				
TAL (LAB) PROJECT MANAGER <i>Jerry Lauer</i>	P.O. NUMBER	CONTRACT NO.										STANDARD REPORT DELIVERY					
CLIENT (SUE) PM <i>Miguel Cedeno</i>	CLIENT PHONE <i>610-648-2208</i>	CLIENT FAX <i>651-635-3614</i>	COMPOSITE (C) OR GRAB (G) DATE <i>7/8/17</i>	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR									DATE DUE		
CLIENT NAME <i>Martin R. House</i>	CLIENT E-MAIL <i>Martin.House@unisys.com</i>														EXPEDITED REPORT DELIVERY (SURCHARGE)		
CLIENT ADDRESS <i>Smedesford Road Malvern PA 19355</i>	PRESERVATIVE													DATE DUE			
COMPANY CONTRACTING THIS WORK (if applicable) <i>Unisys/VASC</i>														NUMBER OF COOLERS SUBMITTED PER SHIPMENT: <i>1</i>			
SAMPLE	SAMPLE IDENTIFICATION													REMARKS			
DATE	TIME																
—	—	TB060817 lot 041317													Samples correspond to Vega Alta Annual Sampling 2017		
6-8-17	1007	M12Z6													6 vials no air bubble 7 size of a pea		
6-8-17		6 v		2		3											
 680-139744 Chain of Custody																	
(5) Total vials																	

RELINQUISHED BY: (SIGNATURE) <i>M. Patala</i>	DATE <i>6-8-17</i>	TIME <i>1429</i>	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>Jessie R. Edwards</i>	DATE <i>6/9/17</i>	TIME <i>0927</i>	CUSTODY INTACT YES <input type="radio"/> NO <input type="radio"/>	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS <i>0.7(CC+0.5)0.9</i>			
---	-----------------------	---------------------	---	------------------	------------------	---	--	--	--

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

PROJECT REFERENCE
VA Public Supply Net

PROJECT NO.
68010783PROJECT LOCATION
(STATE) PRMATRIX
TYPE

REQUIRED ANALYSIS

PAGE 1 OF 1

TAL (LAB) PROJECT MANAGER

Jerry Xavier

CLIENT SITE PM 787-614-0254

Miguel Cedeno

CLIENT NAME

Martin R. Howe

CLIENT ADDRESS

Swedesfield Road Malvern, PA

19355

COMPANY CONTRACTING THIS WORK (if applicable)

Unisys/VASC

SAMPLE

DATE

TIME

SAMPLE IDENTIFICATION

6-9-17

0932

M22Z4

6-9-17

1001

M22Z6

6-9-17

1046

M22Z8

6-9-17

1016

EB060917

6-12-17

—

TB061217 lot 041317

6-12-17

1034

M2Z7

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

VA Public Supply Wells TAL (LAB) PROJECT MANAGER Jerry Larion CLIENT (SITE) EM 787-614-2254 Miguel Cedeno CLIENT NAME Martin Hause CLIENT ADDRESS 2476 Sandeford Road Malvern, PA 19355 COMPANY CONTRACTING THIS WORK (if applicable) Unisup/VASC				Project Reference Project No. 68010783 P.O. NUMBER Contract No. Client Phone 610-648-2208 Client Fax 651-635-3614 Client E-mail Martin.Hause@unisup.com		Matrix Type Required Analysis Page / / Website: www.testamericainc.com Phone: (912) 354-7858 Fax: (912) 352-0165	
				<input checked="" type="checkbox"/> TestAmerica Savannah 5102 LaRoche Avenue Savannah, GA 31404 <input type="checkbox"/> Alternate Laboratory Name/Location Phone: Fax:			
						Standard Report Delivery Date Due _____ Expedited Report Delivery (SURCHARGE) <input type="checkbox"/> Date Due _____	
						Number of Coolers Submitted per Shipment: 1	
SAMPLE		SAMPLE IDENTIFICATION		NUMBER OF CONTAINERS SUBMITTED		REMARKS	
DATE	TIME			AIR			
—	—	TB061317 lot 041317		6	✓	2	Samples correspond to Vega Alta Annual Sampling 2017.
6-13-17	1048	M15Z6		6	✓	3	
6-13-17	1048	M15Z6 (MS)		6	✓	3	
6-13-17	1048	M15Z6 (MSD)		6	✓	3	
6-13-17	1205	M15Z10		6	✓	3	
TB061317-NIP				6	✓	3	
6-13-17	1253	MW23		6	✓	3	
				 680-139995 Chain of Custody			
				(17) Total vials			
RELINQUISHED BY: (SIGNATURE) MF Partida		DATE 6-14-17	TIME 1305	RELINQUISHED BY: (SIGNATURE)		DATE	TIME
RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME
LABORATORY USE ONLY							
RECEIVED FOR LABORATORY BY: (SIGNATURE) N		DATE 6-15-17	TIME 931	CUSTODY INTACT YES <input type="radio"/> NO <input checked="" type="radio"/>	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS 1.9/2.4

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

				<input checked="" type="checkbox"/> TestAmerica Savannah 5102 LaRoche Avenue Savannah, GA 31404		Website: www.testamericainc.com Phone: (912) 354-7858 Fax: (912) 352-0165			
				<input type="checkbox"/> Alternate Laboratory Name/Location		Phone: Fax:			
PROJECT REFERENCE <i>VA Public Supply Wells 68010783</i>	PROJECT NO. <i>68010783</i>	PROJECT LOCATION (STATE) <i>PR</i>	MATRIX TYPE	REQUIRED ANALYSIS				PAGE <i>1</i> OF <i>1</i>	
TAL (LAB) PROJECT MANAGER <i>Jerry Laike</i>	P.O. NUMBER	CONTRACT NO.						STANDARD REPORT DELIVERY <input checked="" type="checkbox"/>	
CLIENT (SITE) PM <i>787-614-0254</i> <i>Miguel Cedeno</i>	CLIENT PHONE <i>610-648-2208</i>	CLIENT FAX <i>651-635-3614</i>						DATE DUE _____	
CLIENT NAME <i>Martin R. Howe</i>	CLIENT E-MAIL <i>Martin.Howe@usisyp.com</i>							EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="checkbox"/>	
CLIENT ADDRESS <i>2476 Smedesford Road Malvern, PA 19355</i>								DATE DUE _____	
COMPANY CONTRACTING THIS WORK (if applicable) <i>Urisys/VASC</i>									
SAMPLE	SAMPLE IDENTIFICATION			AIR	NUMBER OF CONTAINERS SUBMITTED				REMARKS
DATE	TIME				2				<i>Sample(s)</i>
<i>—</i>	<i>—</i>	<i>TB061517 lot 041317</i>		<i>G✓</i>	<i>3</i>				<i>correspond to</i>
<i>6-15-17</i>	<i>1021</i>	<i>M4Z4</i>		<i>G✓</i>	<i>3</i>				<i>Vega Alta</i>
<i>6-15-17</i>	<i>1108</i>	<i>M4Z8</i>		<i>G✓</i>	<i>3</i>				<i>Actual sampling</i>
									<i>2017</i>
 <i>680-140029 Chain of Custody</i>									<i>Tripple blank vials have air bubbles.</i>
RELINQUISHED BY: (SIGNATURE) <i>M. P. Portela</i>	DATE <i>6-15-17</i>	TIME <i>1150</i>	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	
LABORATORY USE ONLY									
RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>Jerry S</i>	DATE <i>6-16-17</i>	TIME <i>0931</i>	CUSTODY INTACT YES <input type="radio"/> NO <input checked="" type="radio"/>	CUSTODY SEAL NO. <i>680-140029</i>	SAVANNAH LOG NO.	LABORATORY REMARKS			

2.9 (c) 2.2%

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

~~TestAmerica Savannah~~
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:

Fax:

PROJECT REFERENCE <i>VA Public Supply Wells</i>	PROJECT NO. 608010783	PROJECT LOCATION (STATE) <i>PR</i>	MATRIX TYPE	REQUIRED ANALYSIS				PAGE 1 OF 1
TAL (LAB) PROJECT MANAGER <i>Jerry Xavier</i>	P.O. NUMBER	CONTRACT NO.						STANDARD REPORT DELIVERY <i>X</i>
CLIENT (SITE) FIRM <i>Miguel Cedeno</i>	CLIENT PHONE 787-614-2254	CLIENT FAX 610-648-2208	CLIENT FAX 651-635-3614					DATE DUE _____
CLIENT NAME <i>Martin R. House</i>	CLIENT E-MAIL <i>Martin.House@Unisys.com</i>							EXPEDITED REPORT DELIVERY (SURCHARGE) <i>O</i>
CLIENT ADDRESS <i>2476 Smedley Road Malvern, PA 19355</i>								DATE DUE _____
COMPANY CONTRACTING THIS WORK (if applicable) <i>Unisys / VA3C</i>								NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1
SAMPLE	SAMPLE IDENTIFICATION			NUMBER OF CONTAINERS SUBMITTED				REMARKS
DATE	TIME			G/V	2			
6-16-17	0952	M 821		G/V	3			<i>Samples correspond to Vega Alta</i>
6-16-17	1034	M 825		G/V	3			<i>Annual sampling 2017</i>
6-16-17	1127	M 829		G/V	3			
6-16-17	0830	M 721		G/V	3			
6-19-17	1111	M 626		G/V	3			
6-19-17	1111	M 626 (MS)		G/V	3			
6-19-17	1111	M 626 (MSD)		G/V	3			
								*Triplicate vials have air bubbles.

(23) Total vials

RELINQUISHED BY: (SIGNATURE)

M. I. Partila

DATE	TIME
6-19-17	12:11

RELINQUISHED BY: (SIGNATURE)

DATE TIME RELINQUISH



680-140108 Chain of Custody

RECEIVED BY: (SIGNATURE)

DATE	TIME
------	------

RECEIVED BY: (SIGNATURE)

DATE	TIME	RECEIVED
------	------	----------

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY
(SIGNATURE)

DATE TIME

CUSTODY INTACT

CUSTODY
SEAL NO.

SAVANNAH
LOG NO.

LABORATORY REMARKS

1.7 (CF) 1.0°c

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

PROJECT REFERENCE

VA Public Supply Wells 68010783

PROJECT NO.

PROJECT LOCATION
(STATE) PRMATRIX
TYPE

REQUIRED ANALYSIS

PAGE 1 OF 1

TAL (LAB) PROJECT MANAGER

Terry Rainey

P.O. NUMBER

CONTRACT NO.

STANDARD REPORT
DELIVERY

DATE DUE _____

CLIENT (SITE) PM

787-614-2254

CLIENT PHONE

610-648-2208 651-635-3614

CLIENT FAX

CLIENT NAME

Miguel Cedeno

CLIENT E-MAIL

Martin.R.Howe@uiisup.com

CLIENT ADDRESS

2476 Smedesford Road Malvern PA 19355

COMPANY CONTRACTING THIS WORK (if applicable)

Uuisup/VASC

COMPOSITE (C) OR GRAB (G) INDICATE

AQUEOUS (WATER)

SOLID OR SEMISOLID

AIR

NONAQUEOUS LIQUID (OIL, SOLVENT,...)

HCO 624

PRESERVATIVE

NUMBER OF CONTAINERS SUBMITTED

REMARKS



680-140208 Chain of Custody

Sample
correspond
to Vega Alta
Circular
Sampling
2017

One trip blank
vial has an
air bubble.

(5) Total vials

RELINQUISHED BY: (SIGNATURE)

MI Pareda

DATE

6-21-17 1145

TIME

RELINQUISHED BY: (SIGNATURE)

DATE

RELINQUISHED BY: (SIGNATURE)

DATE

RECEIVED BY: (SIGNATURE)

DATE

TIME

RECEIVED BY: (SIGNATURE)

DATE

RECEIVED BY: (SIGNATURE)

DATE

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY:
(SIGNATURE)

DATE

TIME

CUSTODY INTACT

YES
NO CUSTODY
SEAL NO.SAVANNAH
LOG NO.

LABORATORY REMARKS

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

PROJECT REFERENCE <i>VA Public Supply Wells</i>		PROJECT NO. 68010783	PROJECT LOCATION (STATE) PR	MATRIX TYPE	REQUIRED ANALYSIS				PAGE 1	OF 1			
TAL (LAB) PROJECT MANAGER <i>Terry Larier</i>		P.O. NUMBER	CONTRACT NO.						STANDARD REPORT DELIVERY <input checked="" type="checkbox"/>				
CLIENT (SITE) RM <i>787-614-2254</i> <i>Miguel Cedeno</i>		CLIENT PHONE 610-648-2208	CLIENT FAX 651-635-3614							DATE DUE _____			
CLIENT NAME <i>Martin R. House</i>		CLIENT E-MAIL							EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="checkbox"/>				
CLIENT ADDRESS <i>2476 Smedesford Road Malvern, PA 19355</i>								DATE DUE _____					
COMPANY CONTRACTING THIS WORK (if applicable) <i>Unisys/VASC</i>								NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1					
SAMPLE		SAMPLE IDENTIFICATION		COMPOSITE (C) OR GRAB (G) INDICATE		NUMBER OF CONTAINERS SUBMITTED				REMARKS			
DATE	TIME			AQUEOUS (WATER)	SOLID OR SEMI-SOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)						
—	—	<i>TB062317 lot 041317</i>		<i>G✓</i>		<i>G✓</i>	<i>G✓</i>	<i>2</i>				<i>Sample corresponds to Vega Alta Annual Sampling 2017</i>	
6-23-17	1033	<i>M9Z3</i>		<i>G✓</i>		<i>G✓</i>	<i>G✓</i>	<i>3</i>					
6-23-17	1111	<i>M9Z5</i>		<i>G✓</i>		<i>G✓</i>	<i>G✓</i>	<i>3</i>					
6-23-17	1205	<i>M9Z7</i>		<i>G✓</i>		<i>G✓</i>	<i>G✓</i>	<i>3</i>					
6-23-17	1245	<i>M9Z9</i>		<i>G✓</i>		<i>G✓</i>	<i>G✓</i>	<i>3</i>					
6-23-17	0900	<i>M31Z7</i>		<i>G✓</i>		<i>G✓</i>	<i>G✓</i>	<i>3</i>					
6-23-17	1134	<i>EB062317</i>		<i>G✓</i>		<i>G✓</i>	<i>G✓</i>	<i>3</i>					
PRESERVATIVE													
680-140374 Chain of Custody													
<i>(Signature)</i>													

RELINQUISHED BY: (SIGNATURE) <i>M. Postle</i>	DATE 6-23-17	TIME 1535	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY						
RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE 0-27-17	TIME 900	CUSTODY INTACT YES <input checked="" type="radio"/> NO <input type="radio"/>	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS 25/3.0



680-140374 Chain of Custody

(20) Total vials

APPENDIX B
VALIDATED LABORATORY ANALYTICAL RESULTS

APPENDIX B
2017 ANNUAL GROUNDWATER MONITORING
SAMPLE DATA VALIDATION REPORTS

SUMMARY OF SAMPLING LOCATIONS BY SAMPLE DELIVERY GROUP

Sampling Locations & Dates		Sample Delivery Group
Well Number	Sampling Dates	VOCs
M2Z7	12-Jun-17	680-139864
M4Z4	15-Jun-17	680-140029
M4Z8	15-Jun-17	680-140029
M5Z5	5-Jun-17	680-139603
M5Z7	5-Jun-17	680-139603
M5Z7 DUP: M27Z9)	5-Jun-17	680-139603
M5Z10	5-Jun-17	680-139603
M6Z6	19-Jun-17	680-140108
M8Z1	16-Jun-17	680-140108
M8Z5	16-Jun-17	680-140108
M8Z9	16-Jun-17	680-140108
M9Z3	23-Jun-17	680-140374
M9Z5	23-Jun-17	680-140374
M9Z5 DUP: M31Z7	23-Jun-17	680-140374
M9Z7	23-Jun-17	680-140374
M9Z9	23-Jun-17	680-140374
M12Z6	8-Jun-17	680-139744
M13Z8	21-Jun-17	680-140208
M15Z6	13-Jun-17	680-139995
M15Z10	13-Jun-17	680-139995
M16Z5	1-Jun-17	680-139443
M16Z8	1-Jun-17	680-139443
M17Z1	6-Jun-17	680-139603
M17Z4	6-Jun-17	680-139603
M17Z6	6-Jun-17	680-139603
M17Z8	6-Jun-17	680-139603
M19Z6	31-May-17	680-139443
M22Z4	9-Jun-17	680-139864
M22Z6	9-Jun-17	680-139864
M22Z8	9-Jun-17	680-139684
MW-23	13-Jun-17	680-139995
M7Z1	1-Jun-17	680-139443
M7Z1	16-Jun-17	680-140108

APPENDIX B
2017 ANNUAL GROUNDWATER MONITORING
SAMPLE DATA VALIDATION REPORTS

SUMMARY OF SAMPLING LOCATIONS BY SAMPLE DELIVERY GROUP

Sampling Locations & Dates		Sample Delivery Group
Well Number	Sampling Dates	VOCs
EB060917	9-Jun-17	680-139864
EB062317	23-Jun-17	680-140374
TB053117	31-May-17	680-139443
TB060117	1-Jun-17	680-139443
TB060517	5-Jun-17	680-139603
TB060617	6-Jun-17	680-139603
TB060817	8-Jun-17	680-139744
TB060917	9-Jun-17	680-139864
TB061217	12-Jun-17	680-139864
TB061317	13-Jun-17	680-139995
TB061517	15-Jun-17	680-140029
TB061617	16-Jun-17	680-140108
TB062117	21-Jun-17	680-140208
TB062317	23-Jun-17	680-140374

Notes:

TB: Trip Blank

EB: Equipment Blank

VOCs: Volatile organic compounds

**GROUNDWATER ANALYTICAL SAMPLES
ORGANIC ANALYSIS – VOLATILES IN WATER
TestAmerica Savannah Job No. 680-139443
Samples Collected May 31 and June 1, 2017**

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-139443-1

Client Project/Site: VA Public Supply Wells (Annual)

For:

Unisys Corporation

Vega Alta Trust c/o Unisys Corporation

2476 Swedesford Road

Malvern, Pennsylvania 19355

Attn: Mr. Martin Howe



Authorized for release by:

6/21/2017 4:06:14 PM

Jerry Lanier, Project Manager I

(912)354-7858 e.3410

jerry.lanier@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Unisys Corporation
Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139443-1

Job ID: 680-139443-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: Unisys Corporation

Project: VA Public Supply Wells (Annual)

Report Number: 680-139443-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 06/02/2017; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.5 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples M19Z6 (680-139443-1), TB053117 Lot 041317 (680-139443-2), M7Z1 (680-139443-3), M16Z5 (680-139443-4), M16Z8 (680-139443-5) and TB060117 Lot 041317 (680-139443-6) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA Method 624. The samples were analyzed on 06/07/2017.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Sample Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139443-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-139443-1	M19Z6	Water	05/31/17 10:09	06/02/17 09:15
680-139443-2	TB053117 Lot 041317	Water	05/31/17 00:00	06/02/17 09:15
680-139443-3	M7Z1	Water	06/01/17 09:05	06/02/17 09:15
680-139443-4	M16Z5	Water	06/01/17 10:11	06/02/17 09:15
680-139443-5	M16Z8	Water	06/01/17 10:57	06/02/17 09:15
680-139443-6	TB060117 Lot 041317	Water	06/01/17 00:00	06/02/17 09:15

Method Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139443-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL SAV

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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Definitions/Glossary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139443-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Unisys Corporation
Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139443-1

Client Sample ID: M19Z6

Lab Sample ID: 680-139443-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	2.4		1.0		ug/L	1		624	Total/NA

Client Sample ID: TB053117 Lot 041317

Lab Sample ID: 680-139443-2

No Detections.

Client Sample ID: M7Z1

Lab Sample ID: 680-139443-3

No Detections.

Client Sample ID: M16Z5

Lab Sample ID: 680-139443-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	2.1		1.0		ug/L	1		624	Total/NA
1,1-Dichloroethene	2.2		1.0		ug/L	1		624	Total/NA
Trichloroethene	15		1.0		ug/L	1		624	Total/NA

Client Sample ID: M16Z8

Lab Sample ID: 680-139443-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	2.1		1.0		ug/L	1		624	Total/NA
1,1-Dichloroethene	2.1		1.0		ug/L	1		624	Total/NA
Trichloroethene	15		1.0		ug/L	1		624	Total/NA

Client Sample ID: TB060117 Lot 041317

Lab Sample ID: 680-139443-6

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139443-1

Client Sample ID: M19Z6

Date Collected: 05/31/17 10:09

Date Received: 06/02/17 09:15

Lab Sample ID: 680-139443-1

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		1.0		ug/L			06/07/17 18:49	1
Chloroform	2.4		1.0		ug/L			06/07/17 18:49	1
Chloromethane	ND		1.0		ug/L			06/07/17 18:49	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/07/17 18:49	1
Dibromochloromethane	ND		1.0		ug/L			06/07/17 18:49	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/07/17 18:49	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/07/17 18:49	1
1,1-Dichloroethane	ND		1.0		ug/L			06/07/17 18:49	1
1,1-Dichloroethene	ND		1.0		ug/L			06/07/17 18:49	1
1,2-Dichloropropane	ND		1.0		ug/L			06/07/17 18:49	1
Ethylbenzene	ND		1.0		ug/L			06/07/17 18:49	1
Methylene Chloride	ND		5.0		ug/L			06/07/17 18:49	1
Naphthalene	ND		5.0		ug/L			06/07/17 18:49	1
Styrene	ND		1.0		ug/L			06/07/17 18:49	1
Tetrachloroethene	ND		1.0		ug/L			06/07/17 18:49	1
Toluene	ND		1.0		ug/L			06/07/17 18:49	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/07/17 18:49	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/07/17 18:49	1
Trichloroethene	ND		1.0		ug/L			06/07/17 18:49	1
Trichlorofluoromethane	ND		1.0		ug/L			06/07/17 18:49	1
Vinyl chloride	ND		1.0		ug/L			06/07/17 18:49	1
Xylenes, Total	ND		2.0		ug/L			06/07/17 18:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		79 - 119					06/07/17 18:49	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 130					06/07/17 18:49	1
4-Bromofluorobenzene (Surr)	93		71 - 121					06/07/17 18:49	1
Dibromofluoromethane (Surr)	101		77 - 129					06/07/17 18:49	1

Client Sample ID: TB053117 Lot 041317

Lab Sample ID: 680-139443-2

Matrix: Water

Date Collected: 05/31/17 00:00

Date Received: 06/02/17 09:15

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		1.0		ug/L			06/07/17 18:06	1
Chloroform	ND		1.0		ug/L			06/07/17 18:06	1
Chloromethane	ND		1.0		ug/L			06/07/17 18:06	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/07/17 18:06	1
Dibromochloromethane	ND		1.0		ug/L			06/07/17 18:06	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/07/17 18:06	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/07/17 18:06	1
1,1-Dichloroethane	ND		1.0		ug/L			06/07/17 18:06	1
1,1-Dichloroethene	ND		1.0		ug/L			06/07/17 18:06	1
1,2-Dichloropropane	ND		1.0		ug/L			06/07/17 18:06	1
Ethylbenzene	ND		1.0		ug/L			06/07/17 18:06	1
Methylene Chloride	ND		5.0		ug/L			06/07/17 18:06	1
Naphthalene	ND		5.0		ug/L			06/07/17 18:06	1
Styrene	ND		1.0		ug/L			06/07/17 18:06	1
Tetrachloroethene	ND		1.0		ug/L			06/07/17 18:06	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139443-1

Client Sample ID: TB053117 Lot 041317

Lab Sample ID: 680-139443-2

Matrix: Water

Date Collected: 05/31/17 00:00

Date Received: 06/02/17 09:15

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0		ug/L			06/07/17 18:06	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/07/17 18:06	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/07/17 18:06	1
Trichloroethene	ND		1.0		ug/L			06/07/17 18:06	1
Trichlorofluoromethane	ND		1.0		ug/L			06/07/17 18:06	1
Vinyl chloride	ND		1.0		ug/L			06/07/17 18:06	1
Xylenes, Total	ND		2.0		ug/L			06/07/17 18:06	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100			79 - 119				06/07/17 18:06	1
1,2-Dichloroethane-d4 (Surr)	98			70 - 130				06/07/17 18:06	1
4-Bromofluorobenzene (Surr)	93			71 - 121				06/07/17 18:06	1
Dibromofluoromethane (Surr)	101			77 - 129				06/07/17 18:06	1

Client Sample ID: M7Z1

Lab Sample ID: 680-139443-3

Matrix: Water

Date Collected: 06/01/17 09:05

Date Received: 06/02/17 09:15

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		1.0		ug/L			06/07/17 20:16	1
Chloroform	ND		1.0		ug/L			06/07/17 20:16	1
Chloromethane	ND		1.0		ug/L			06/07/17 20:16	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/07/17 20:16	1
Dibromochloromethane	ND		1.0		ug/L			06/07/17 20:16	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/07/17 20:16	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/07/17 20:16	1
1,1-Dichloroethane	ND		1.0		ug/L			06/07/17 20:16	1
1,1-Dichloroethene	ND		1.0		ug/L			06/07/17 20:16	1
1,2-Dichloropropane	ND		1.0		ug/L			06/07/17 20:16	1
Ethylbenzene	ND		1.0		ug/L			06/07/17 20:16	1
Methylene Chloride	ND		5.0		ug/L			06/07/17 20:16	1
Naphthalene	ND		5.0		ug/L			06/07/17 20:16	1
Styrene	ND		1.0		ug/L			06/07/17 20:16	1
Tetrachloroethene	ND		1.0		ug/L			06/07/17 20:16	1
Toluene	ND		1.0		ug/L			06/07/17 20:16	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/07/17 20:16	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/07/17 20:16	1
Trichloroethene	ND		1.0		ug/L			06/07/17 20:16	1
Trichlorofluoromethane	ND		1.0		ug/L			06/07/17 20:16	1
Vinyl chloride	ND		1.0		ug/L			06/07/17 20:16	1
Xylenes, Total	ND		2.0		ug/L			06/07/17 20:16	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97			79 - 119				06/07/17 20:16	1
1,2-Dichloroethane-d4 (Surr)	96			70 - 130				06/07/17 20:16	1
4-Bromofluorobenzene (Surr)	94			71 - 121				06/07/17 20:16	1
Dibromofluoromethane (Surr)	99			77 - 129				06/07/17 20:16	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139443-1

Client Sample ID: M16Z5

Date Collected: 06/01/17 10:11

Date Received: 06/02/17 09:15

Lab Sample ID: 680-139443-4

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		1.0		ug/L			06/07/17 20:38	1
Chloroform	2.1		1.0		ug/L			06/07/17 20:38	1
Chloromethane	ND		1.0		ug/L			06/07/17 20:38	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/07/17 20:38	1
Dibromochloromethane	ND		1.0		ug/L			06/07/17 20:38	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/07/17 20:38	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/07/17 20:38	1
1,1-Dichloroethane	ND		1.0		ug/L			06/07/17 20:38	1
1,1-Dichloroethene	2.2		1.0		ug/L			06/07/17 20:38	1
1,2-Dichloropropane	ND		1.0		ug/L			06/07/17 20:38	1
Ethylbenzene	ND		1.0		ug/L			06/07/17 20:38	1
Methylene Chloride	ND		5.0		ug/L			06/07/17 20:38	1
Naphthalene	ND		5.0		ug/L			06/07/17 20:38	1
Styrene	ND		1.0		ug/L			06/07/17 20:38	1
Tetrachloroethene	ND		1.0		ug/L			06/07/17 20:38	1
Toluene	ND		1.0		ug/L			06/07/17 20:38	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/07/17 20:38	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/07/17 20:38	1
Trichloroethene	15		1.0		ug/L			06/07/17 20:38	1
Trichlorofluoromethane	ND		1.0		ug/L			06/07/17 20:38	1
Vinyl chloride	ND		1.0		ug/L			06/07/17 20:38	1
Xylenes, Total	ND		2.0		ug/L			06/07/17 20:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		79 - 119					06/07/17 20:38	1
1,2-Dichloroethane-d4 (Surr)	97		70 - 130					06/07/17 20:38	1
4-Bromofluorobenzene (Surr)	95		71 - 121					06/07/17 20:38	1
Dibromofluoromethane (Surr)	101		77 - 129					06/07/17 20:38	1

Client Sample ID: M16Z8

Date Collected: 06/01/17 10:57

Date Received: 06/02/17 09:15

Lab Sample ID: 680-139443-5

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		1.0		ug/L			06/07/17 21:00	1
Chloroform	2.1		1.0		ug/L			06/07/17 21:00	1
Chloromethane	ND		1.0		ug/L			06/07/17 21:00	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/07/17 21:00	1
Dibromochloromethane	ND		1.0		ug/L			06/07/17 21:00	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/07/17 21:00	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/07/17 21:00	1
1,1-Dichloroethane	ND		1.0		ug/L			06/07/17 21:00	1
1,1-Dichloroethene	2.1		1.0		ug/L			06/07/17 21:00	1
1,2-Dichloropropane	ND		1.0		ug/L			06/07/17 21:00	1
Ethylbenzene	ND		1.0		ug/L			06/07/17 21:00	1
Methylene Chloride	ND		5.0		ug/L			06/07/17 21:00	1
Naphthalene	ND		5.0		ug/L			06/07/17 21:00	1
Styrene	ND		1.0		ug/L			06/07/17 21:00	1
Tetrachloroethene	ND		1.0		ug/L			06/07/17 21:00	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation
 Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139443-1

Client Sample ID: M16Z8

Lab Sample ID: 680-139443-5

Matrix: Water

Date Collected: 06/01/17 10:57
 Date Received: 06/02/17 09:15

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0		ug/L			06/07/17 21:00	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/07/17 21:00	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/07/17 21:00	1
Trichloroethene	15		1.0		ug/L			06/07/17 21:00	1
Trichlorofluoromethane	ND		1.0		ug/L			06/07/17 21:00	1
Vinyl chloride	ND		1.0		ug/L			06/07/17 21:00	1
Xylenes, Total	ND		2.0		ug/L			06/07/17 21:00	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>		98		79 - 119				06/07/17 21:00	1
<i>1,2-Dichloroethane-d4 (Surr)</i>		96		70 - 130				06/07/17 21:00	1
<i>4-Bromofluorobenzene (Surr)</i>		96		71 - 121				06/07/17 21:00	1
<i>Dibromofluoromethane (Surr)</i>		101		77 - 129				06/07/17 21:00	1

Client Sample ID: TB060117 Lot 041317

Lab Sample ID: 680-139443-6

Matrix: Water

Date Collected: 06/01/17 00:00
 Date Received: 06/02/17 09:15

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		1.0		ug/L			06/07/17 18:27	1
Chloroform	ND		1.0		ug/L			06/07/17 18:27	1
Chloromethane	ND		1.0		ug/L			06/07/17 18:27	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/07/17 18:27	1
Dibromochloromethane	ND		1.0		ug/L			06/07/17 18:27	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/07/17 18:27	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/07/17 18:27	1
1,1-Dichloroethane	ND		1.0		ug/L			06/07/17 18:27	1
1,1-Dichloroethene	ND		1.0		ug/L			06/07/17 18:27	1
1,2-Dichloropropane	ND		1.0		ug/L			06/07/17 18:27	1
Ethylbenzene	ND		1.0		ug/L			06/07/17 18:27	1
Methylene Chloride	ND		5.0		ug/L			06/07/17 18:27	1
Naphthalene	ND		5.0		ug/L			06/07/17 18:27	1
Styrene	ND		1.0		ug/L			06/07/17 18:27	1
Tetrachloroethene	ND		1.0		ug/L			06/07/17 18:27	1
Toluene	ND		1.0		ug/L			06/07/17 18:27	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/07/17 18:27	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/07/17 18:27	1
Trichloroethene	ND		1.0		ug/L			06/07/17 18:27	1
Trichlorofluoromethane	ND		1.0		ug/L			06/07/17 18:27	1
Vinyl chloride	ND		1.0		ug/L			06/07/17 18:27	1
Xylenes, Total	ND		2.0		ug/L			06/07/17 18:27	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>		99		79 - 119				06/07/17 18:27	1
<i>1,2-Dichloroethane-d4 (Surr)</i>		97		70 - 130				06/07/17 18:27	1
<i>4-Bromofluorobenzene (Surr)</i>		93		71 - 121				06/07/17 18:27	1
<i>Dibromofluoromethane (Surr)</i>		102		77 - 129				06/07/17 18:27	1

TestAmerica Savannah

Surrogate Summary

Client: Unisys Corporation

TestAmerica Job ID: 680-139443-1

Project/Site: VA Public Supply Wells (Annual)

Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TOL (79-119)	12DCE (70-130)	BFB (71-121)	DBFM (77-129)						
680-139443-1	M19Z6	99	96	93	101						
680-139443-2	TB053117 Lot 041317	100	98	93	101						
680-139443-3	M7Z1	97	96	94	99						
680-139443-4	M16Z5	99	97	95	101						
680-139443-5	M16Z8	98	96	96	101						
680-139443-6	TB060117 Lot 041317	99	97	93	102						
LCS 680-482994/3	Lab Control Sample	99	95	92	98						
LCSD 680-482994/4	Lab Control Sample Dup	97	94	86	99						
MB 680-482994/7	Method Blank	100	96	94	100						

Surrogate Legend

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139443-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-482994/7

Matrix: Water

Analysis Batch: 482994

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
Bromodichloromethane	ND				1.0		ug/L			06/07/17 17:44	1
Chloroform	ND				1.0		ug/L			06/07/17 17:44	1
Chloromethane	ND				1.0		ug/L			06/07/17 17:44	1
cis-1,2-Dichloroethene	ND				1.0		ug/L			06/07/17 17:44	1
Dibromochloromethane	ND				1.0		ug/L			06/07/17 17:44	1
1,4-Dichlorobenzene	ND				1.0		ug/L			06/07/17 17:44	1
Dichlorodifluoromethane	ND				1.0		ug/L			06/07/17 17:44	1
1,1-Dichloroethane	ND				1.0		ug/L			06/07/17 17:44	1
1,1-Dichloroethene	ND				1.0		ug/L			06/07/17 17:44	1
1,2-Dichloropropane	ND				1.0		ug/L			06/07/17 17:44	1
Ethylbenzene	ND				1.0		ug/L			06/07/17 17:44	1
Methylene Chloride	ND				5.0		ug/L			06/07/17 17:44	1
Naphthalene	ND				5.0		ug/L			06/07/17 17:44	1
Styrene	ND				1.0		ug/L			06/07/17 17:44	1
Tetrachloroethene	ND				1.0		ug/L			06/07/17 17:44	1
Toluene	ND				1.0		ug/L			06/07/17 17:44	1
trans-1,2-Dichloroethene	ND				1.0		ug/L			06/07/17 17:44	1
1,1,1-Trichloroethane	ND				1.0		ug/L			06/07/17 17:44	1
Trichloroethene	ND				1.0		ug/L			06/07/17 17:44	1
Trichlorofluoromethane	ND				1.0		ug/L			06/07/17 17:44	1
Vinyl chloride	ND				1.0		ug/L			06/07/17 17:44	1
Xylenes, Total	ND				2.0		ug/L			06/07/17 17:44	1

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Toluene-d8 (Surr)	100		100		79 - 119		06/07/17 17:44	1
1,2-Dichloroethane-d4 (Surr)	96		96		70 - 130		06/07/17 17:44	1
4-Bromofluorobenzene (Surr)	94		94		71 - 121		06/07/17 17:44	1
Dibromofluoromethane (Surr)	100		100		77 - 129		06/07/17 17:44	1

Lab Sample ID: LCS 680-482994/3

Matrix: Water

Analysis Batch: 482994

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MB	LCS	LCS	Unit	D	%Rec	Limits	%Rec.
		Result	Qualifier	Unit					
Bromodichloromethane	20.0	19.0		ug/L			95	35 - 155	
Chloroform	20.0	19.6		ug/L			98	51 - 138	
Chloromethane	20.0	16.1		ug/L			80	1 - 273	
cis-1,2-Dichloroethene	20.0	19.7		ug/L			98	60 - 131	
Dibromochloromethane	20.0	19.7		ug/L			98	53 - 149	
1,4-Dichlorobenzene	20.0	19.3		ug/L			97	18 - 190	
Dichlorodifluoromethane	20.0	20.6		ug/L			103	70 - 130	
1,1-Dichloroethane	20.0	17.9		ug/L			89	59 - 155	
1,1-Dichloroethene	20.0	19.7		ug/L			99	1 - 234	
1,2-Dichloropropane	20.0	16.9		ug/L			84	1 - 210	
Ethylbenzene	20.0	19.7		ug/L			99	37 - 162	
Methylene Chloride	20.0	17.4		ug/L			87	1 - 221	
Naphthalene	20.0	15.8		ug/L			79	58 - 143	
Styrene	20.0	19.6		ug/L			98	50 - 150	

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

TestAmerica Job ID: 680-139443-1

Project/Site: VA Public Supply Wells (Annual)

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-482994/3

Matrix: Water

Analysis Batch: 482994

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS			Unit	D	%Rec	%Rec.
		Result	Qualifier	Limits				
Tetrachloroethene	20.0	22.7		ug/L		113	64 - 148	
Toluene	20.0	19.0		ug/L		95	47 - 150	
trans-1,2-Dichloroethene	20.0	20.1		ug/L		100	54 - 156	
1,1,1-Trichloroethane	20.0	21.2		ug/L		106	52 - 162	
Trichloroethene	20.0	21.3		ug/L		106	71 - 157	
Trichlorofluoromethane	20.0	19.0		ug/L		95	17 - 181	
Vinyl chloride	20.0	16.9		ug/L		84	1 - 251	
Xylenes, Total	40.0	40.1		ug/L		100	78 - 119	

LCS LCS

Surrogate	%Recovery	LCS		Limits
		Qualifier	Limits	
Toluene-d8 (Surr)	99		79 - 119	
1,2-Dichloroethane-d4 (Surr)	95		70 - 130	
4-Bromofluorobenzene (Surr)	92		71 - 121	
Dibromofluoromethane (Surr)	98		77 - 129	

Lab Sample ID: LCSD 680-482994/4

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analysis Batch: 482994

Analyte	Spike Added	LCSD			Unit	D	%Rec	%Rec.	RPD	Limit
		Result	Qualifier	Limits						
Bromodichloromethane	20.0	18.3		ug/L		91	35 - 155	4	30	
Chloroform	20.0	19.3		ug/L		96	51 - 138	1	30	
Chloromethane	20.0	16.1		ug/L		81	1 - 273	0	50	
cis-1,2-Dichloroethene	20.0	19.9		ug/L		99	60 - 131	1	30	
Dibromochloromethane	20.0	18.7		ug/L		93	53 - 149	5	30	
1,4-Dichlorobenzene	20.0	18.6		ug/L		93	18 - 190	4	30	
Dichlorodifluoromethane	20.0	21.6		ug/L		108	70 - 130	5	30	
1,1-Dichloroethane	20.0	17.7		ug/L		89	59 - 155	1	30	
1,1-Dichloroethene	20.0	19.6		ug/L		98	1 - 234	1	30	
1,2-Dichloropropane	20.0	17.0		ug/L		85	1 - 210	1	30	
Ethylbenzene	20.0	19.9		ug/L		99	37 - 162	1	30	
Methylene Chloride	20.0	17.1		ug/L		85	1 - 221	2	30	
Naphthalene	20.0	15.0		ug/L		75	58 - 143	5	30	
Styrene	20.0	19.8		ug/L		99	50 - 150	1	30	
Tetrachloroethene	20.0	22.9		ug/L		115	64 - 148	1	30	
Toluene	20.0	19.0		ug/L		95	47 - 150	0	30	
trans-1,2-Dichloroethene	20.0	20.1		ug/L		101	54 - 156	0	30	
1,1,1-Trichloroethane	20.0	20.4		ug/L		102	52 - 162	4	30	
Trichloroethene	20.0	20.3		ug/L		102	71 - 157	4	30	
Trichlorofluoromethane	20.0	19.6		ug/L		98	17 - 181	3	30	
Vinyl chloride	20.0	17.7		ug/L		89	1 - 251	5	50	
Xylenes, Total	40.0	40.1		ug/L		100	78 - 119	0	30	

LCSD LCSD

Surrogate	%Recovery	LCSD		Limits
		Qualifier	Limits	
Toluene-d8 (Surr)	97		79 - 119	
1,2-Dichloroethane-d4 (Surr)	94		70 - 130	
4-Bromofluorobenzene (Surr)	86		71 - 121	

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139443-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-482994/4

Matrix: Water

Analysis Batch: 482994

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surrogate)	99		77 - 129

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TestAmerica Savannah

QC Association Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139443-1

GC/MS VOA

Analysis Batch: 482994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-139443-1	M19Z6	Total/NA	Water	624	5
680-139443-2	TB053117 Lot 041317	Total/NA	Water	624	6
680-139443-3	M7Z1	Total/NA	Water	624	7
680-139443-4	M16Z5	Total/NA	Water	624	8
680-139443-5	M16Z8	Total/NA	Water	624	9
680-139443-6	TB060117 Lot 041317	Total/NA	Water	624	10
MB 680-482994/7	Method Blank	Total/NA	Water	624	11
LCS 680-482994/3	Lab Control Sample	Total/NA	Water	624	12
LCSD 680-482994/4	Lab Control Sample Dup	Total/NA	Water	624	13

Lab Chronicle

Client: Unisys Corporation
 Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139443-1

Client Sample ID: M19Z6

Date Collected: 05/31/17 10:09

Date Received: 06/02/17 09:15

Lab Sample ID: 680-139443-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	482994	06/07/17 18:49	CMB	TAL SAV

Instrument ID: CMSA2

Client Sample ID: TB053117 Lot 041317

Date Collected: 05/31/17 00:00

Date Received: 06/02/17 09:15

Lab Sample ID: 680-139443-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	482994	06/07/17 18:06	CMB	TAL SAV

Instrument ID: CMSA2

Client Sample ID: M7Z1

Date Collected: 06/01/17 09:05

Date Received: 06/02/17 09:15

Lab Sample ID: 680-139443-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	482994	06/07/17 20:16	CMB	TAL SAV

Instrument ID: CMSA2

Client Sample ID: M16Z5

Date Collected: 06/01/17 10:11

Date Received: 06/02/17 09:15

Lab Sample ID: 680-139443-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	482994	06/07/17 20:38	CMB	TAL SAV

Instrument ID: CMSA2

Client Sample ID: M16Z8

Date Collected: 06/01/17 10:57

Date Received: 06/02/17 09:15

Lab Sample ID: 680-139443-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	482994	06/07/17 21:00	CMB	TAL SAV

Instrument ID: CMSA2

Client Sample ID: TB060117 Lot 041317

Date Collected: 06/01/17 00:00

Date Received: 06/02/17 09:15

Lab Sample ID: 680-139443-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	482994	06/07/17 18:27	CMB	TAL SAV

Instrument ID: CMSA2

TestAmerica Savannah

Lab Chronicle

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139443-1

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Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TestAmerica

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

THE LEADER IN ENVIRONMENTAL TESTING

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE	PROJECT NO	PROJECT LOC (STATE)	MATRIX TYPE	REQUIRED ANALYSIS	PAGE	OF
VA Public Supply Mills	68010783	PR			1	1
Jerry Larier	P.O. NUMBER	CONTRACT NO.				
CLIENT (SITELM) Miguel Cedillo	CLIENT PHONE 610-648-2254	CLIENT FAX 651-635-3644				
CLIENT NAME Martin House	CLIENT E-MAIL Martin.House@unisys.com					
CLIENT ADDRESS Unisys/VASC	2476 Bredeland Road Malvern PA 19355					
COMPANY CONTRACTING THIS WORK (if applicable)						
SAMPLE	SAMPLE IDENTIFICATION					
DATE	TIME					
5-31-17	1009	41926	✓	3		
—	—	TB053117 lot 04/317	✓	3		
6-01-17	0905	41721	✓	3		
6-01-17	1011	411625	✓	3		
6-01-17	1057	411628	✓	3		
—	—	TB060117 lot 04/317	✓	3		
RELINQUISHED BY: (SIGNATURE) <i>WT Patalia</i>	DATE 6-01-17	TIME 1140	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	REINQUISITION BY: (SIGNATURE)
RECEIVED BY: (SIGNATURE) <i>WT Patalia</i>	DATE 6-2-17	TIME 915	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
LABORATORY USE ONLY						LABORATORY REMARKS 1-2/0-8
RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>WT Patalia</i>	DATE 6-2-17	TIME 915	CUSTODY INTACT YES No	SAVANNAH LOG NO.		

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Login Sample Receipt Checklist

Client: Unisys Corporation

Job Number: 680-139443-1

Login Number: 139443

List Source: TestAmerica Savannah

List Number: 1

Creator: Flanagan, Naomi V

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139443-1

Laboratory: TestAmerica Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Puerto Rico	State Program	2	GA00006	12-31-17

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**GROUNDWATER ANALYTICAL SAMPLES
ORGANIC ANALYSIS – VOLATILES IN WATER
TestAmerica Savannah Job No. 680-139603
Samples Collected June 5 and 6, 2017**



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-139603-1

Client Project/Site: VA Public Supply Wells (Quarterly)

For:

Unisys Corporation

Vega Alta Trust c/o Unisys Corporation

2476 Swedesford Road

Malvern, Pennsylvania 19355

Attn: Mr. Martin Howe

Kathryn Smith

Authorized for release by:

6/26/2017 9:14:43 AM

Kathryn Smith, Manager of Project Management

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Designee for

Jerry Lanier, Project Manager I

(912)354-7858 e.3410

jerry.lanier@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Unisys Corporation
Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Job ID: 680-139603-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: Unisys Corporation

Project: VA Public Supply Wells (Quarterly)

Report Number: 680-139603-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 06/07/2017; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.3 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB060517 lot 041317 (680-139603-1), M5Z5 (680-139603-2), M5Z7 (680-139603-3), M5Z10 (680-139603-4), M27Z9 (680-139603-5), TB060617 lot 041317 (680-139603-6), M17Z1 (680-139603-7), M17Z4 (680-139603-8), M17Z6 (680-139603-9) and M17Z8 (680-139603-10) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA Method 624. The samples were analyzed on 06/12/2017, 06/15/2017 and 06/16/2017.

No or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Sample Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-139603-1	TB060517 lot 041317	Water	06/05/17 00:00	06/07/17 09:43
680-139603-2	M5Z5	Water	06/05/17 10:45	06/07/17 09:43
680-139603-3	M5Z7	Water	06/05/17 11:28	06/07/17 09:43
680-139603-4	M5Z10	Water	06/05/17 12:17	06/07/17 09:43
680-139603-5	M27Z9	Water	06/05/17 14:05	06/07/17 09:43
680-139603-6	TB060617 lot 041317	Water	06/06/17 00:00	06/07/17 09:43
680-139603-7	M17Z1	Water	06/06/17 10:04	06/07/17 09:43
680-139603-8	M17Z4	Water	06/06/17 10:48	06/07/17 09:43
680-139603-9	M17Z6	Water	06/06/17 11:28	06/07/17 09:43
680-139603-10	M17Z8	Water	06/06/17 12:12	06/07/17 09:43

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TestAmerica Savannah

Method Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL SAV

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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Definitions/Glossary

Client: Unisys Corporation

TestAmerica Job ID: 680-139603-1

Project/Site: VA Public Supply Wells (Quarterly)

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Client Sample ID: TB060517 lot 041317

Lab Sample ID: 680-139603-1

No Detections.

Client Sample ID: M5Z5

Lab Sample ID: 680-139603-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	10		1.0		ug/L	1	624		Total/NA
cis-1,2-Dichloroethene	4.0		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	3.6		1.0		ug/L	1	624		Total/NA
Trichloroethene	71		1.0		ug/L	1	624		Total/NA

Client Sample ID: M5Z7

Lab Sample ID: 680-139603-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	5.7		1.0		ug/L	1	624		Total/NA
cis-1,2-Dichloroethene	2.1		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	2.3		1.0		ug/L	1	624		Total/NA
Trichloroethene	48		1.0		ug/L	1	624		Total/NA

Client Sample ID: M5Z10

Lab Sample ID: 680-139603-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	9.0		1.0		ug/L	1	624		Total/NA

Client Sample ID: M27Z9

Lab Sample ID: 680-139603-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	8.3		1.0		ug/L	1	624		Total/NA
cis-1,2-Dichloroethene	2.6		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	3.1		1.0		ug/L	1	624		Total/NA
Trichloroethene	63		1.0		ug/L	1	624		Total/NA

Client Sample ID: TB060617 lot 041317

Lab Sample ID: 680-139603-6

No Detections.

Client Sample ID: M17Z1

Lab Sample ID: 680-139603-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	7.4		1.0		ug/L	1	624		Total/NA

Client Sample ID: M17Z4

Lab Sample ID: 680-139603-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	6.1		1.0		ug/L	1	624		Total/NA

Client Sample ID: M17Z6

Lab Sample ID: 680-139603-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	1.6		1.0		ug/L	1	624		Total/NA
Trichloroethene	2.1		1.0		ug/L	1	624		Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Savannah

Detection Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Client Sample ID: M17Z8

Lab Sample ID: 680-139603-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	2.9		1.0		ug/L	1		624	Total/NA
Trichloroethene	1.3		1.0		ug/L	1		624	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Client Sample ID: TB060517 lot 041317

Lab Sample ID: 680-139603-1

Matrix: Water

Date Collected: 06/05/17 00:00

Date Received: 06/07/17 09:43

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/12/17 18:03	1
1,1-Dichloroethane	ND		1.0		ug/L			06/12/17 18:03	1
1,1-Dichloroethene	ND		1.0		ug/L			06/12/17 18:03	1
1,2-Dichloropropane	ND		1.0		ug/L			06/12/17 18:03	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/12/17 18:03	1
Bromodichloromethane	ND		1.0		ug/L			06/12/17 18:03	1
Chloroform	ND		1.0		ug/L			06/12/17 18:03	1
Chloromethane	ND		1.0		ug/L			06/12/17 18:03	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/12/17 18:03	1
Dibromochloromethane	ND		1.0		ug/L			06/12/17 18:03	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/12/17 18:03	1
Ethylbenzene	ND		1.0		ug/L			06/12/17 18:03	1
Methylene Chloride	ND		5.0		ug/L			06/12/17 18:03	1
Naphthalene	ND		5.0		ug/L			06/12/17 18:03	1
Styrene	ND		1.0		ug/L			06/12/17 18:03	1
Tetrachloroethene	ND		1.0		ug/L			06/12/17 18:03	1
Toluene	ND		1.0		ug/L			06/12/17 18:03	1
Trichloroethene	ND		1.0		ug/L			06/12/17 18:03	1
Trichlorofluoromethane	ND		1.0		ug/L			06/12/17 18:03	1
Vinyl chloride	ND		1.0		ug/L			06/12/17 18:03	1
Xylenes, Total	ND		2.0		ug/L			06/12/17 18:03	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/12/17 18:03	1
Surrogate				Prepared		Analyzed		Dil Fac	
Toluene-d8 (Surr)	100			79 - 119				06/12/17 18:03	
1,2-Dichloroethane-d4 (Surr)	97			70 - 130				06/12/17 18:03	
4-Bromofluorobenzene (Surr)	100			71 - 121				06/12/17 18:03	
Dibromofluoromethane (Surr)	99			77 - 129				06/12/17 18:03	

Client Sample ID: M5Z5

Lab Sample ID: 680-139603-2

Matrix: Water

Date Collected: 06/05/17 10:45

Date Received: 06/07/17 09:43

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/15/17 23:36	1
1,1-Dichloroethane	ND		1.0		ug/L			06/15/17 23:36	1
1,1-Dichloroethene	10		1.0		ug/L			06/15/17 23:36	1
1,2-Dichloropropane	ND		1.0		ug/L			06/15/17 23:36	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/15/17 23:36	1
Bromodichloromethane	ND		1.0		ug/L			06/15/17 23:36	1
Chloroform	ND		1.0		ug/L			06/15/17 23:36	1
Chloromethane	ND		1.0		ug/L			06/15/17 23:36	1
cis-1,2-Dichloroethene	4.0		1.0		ug/L			06/15/17 23:36	1
Dibromochloromethane	ND		1.0		ug/L			06/15/17 23:36	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/15/17 23:36	1
Ethylbenzene	ND		1.0		ug/L			06/15/17 23:36	1
Methylene Chloride	ND		5.0		ug/L			06/15/17 23:36	1
Naphthalene	ND		5.0		ug/L			06/15/17 23:36	1
Styrene	ND		1.0		ug/L			06/15/17 23:36	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Client Sample ID: M5Z5

Date Collected: 06/05/17 10:45

Date Received: 06/07/17 09:43

Lab Sample ID: 680-139603-2

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	3.6		1.0		ug/L			06/15/17 23:36	1
Toluene	ND		1.0		ug/L			06/15/17 23:36	1
Trichloroethene	71		1.0		ug/L			06/15/17 23:36	1
Trichlorofluoromethane	ND		1.0		ug/L			06/15/17 23:36	1
Vinyl chloride	ND		1.0		ug/L			06/15/17 23:36	1
Xylenes, Total	ND		2.0		ug/L			06/15/17 23:36	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/15/17 23:36	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101			79 - 119				06/15/17 23:36	1
1,2-Dichloroethane-d4 (Surr)	100			70 - 130				06/15/17 23:36	1
4-Bromofluorobenzene (Surr)	96			71 - 121				06/15/17 23:36	1
Dibromofluoromethane (Surr)	106			77 - 129				06/15/17 23:36	1

Client Sample ID: M5Z7

Date Collected: 06/05/17 11:28

Date Received: 06/07/17 09:43

Lab Sample ID: 680-139603-3

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/15/17 23:58	1
1,1-Dichloroethane	ND		1.0		ug/L			06/15/17 23:58	1
1,1-Dichloroethene	5.7		1.0		ug/L			06/15/17 23:58	1
1,2-Dichloropropane	ND		1.0		ug/L			06/15/17 23:58	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/15/17 23:58	1
Bromodichloromethane	ND		1.0		ug/L			06/15/17 23:58	1
Chloroform	ND		1.0		ug/L			06/15/17 23:58	1
Chloromethane	ND		1.0		ug/L			06/15/17 23:58	1
cis-1,2-Dichloroethene	2.1		1.0		ug/L			06/15/17 23:58	1
Dibromochloromethane	ND		1.0		ug/L			06/15/17 23:58	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/15/17 23:58	1
Ethylbenzene	ND		1.0		ug/L			06/15/17 23:58	1
Methylene Chloride	ND		5.0		ug/L			06/15/17 23:58	1
Naphthalene	ND		5.0		ug/L			06/15/17 23:58	1
Styrene	ND		1.0		ug/L			06/15/17 23:58	1
Tetrachloroethene	2.3		1.0		ug/L			06/15/17 23:58	1
Toluene	ND		1.0		ug/L			06/15/17 23:58	1
Trichloroethene	48		1.0		ug/L			06/15/17 23:58	1
Trichlorofluoromethane	ND		1.0		ug/L			06/15/17 23:58	1
Vinyl chloride	ND		1.0		ug/L			06/15/17 23:58	1
Xylenes, Total	ND		2.0		ug/L			06/15/17 23:58	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/15/17 23:58	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101			79 - 119				06/15/17 23:58	1
1,2-Dichloroethane-d4 (Surr)	99			70 - 130				06/15/17 23:58	1
4-Bromofluorobenzene (Surr)	94			71 - 121				06/15/17 23:58	1
Dibromofluoromethane (Surr)	104			77 - 129				06/15/17 23:58	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Client Sample ID: M5Z10

Date Collected: 06/05/17 12:17

Date Received: 06/07/17 09:43

Lab Sample ID: 680-139603-4

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/16/17 00:20	1
1,1-Dichloroethane	ND		1.0		ug/L			06/16/17 00:20	1
1,1-Dichloroethene	ND		1.0		ug/L			06/16/17 00:20	1
1,2-Dichloropropane	ND		1.0		ug/L			06/16/17 00:20	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/16/17 00:20	1
Bromodichloromethane	ND		1.0		ug/L			06/16/17 00:20	1
Chloroform	ND		1.0		ug/L			06/16/17 00:20	1
Chloromethane	ND		1.0		ug/L			06/16/17 00:20	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 00:20	1
Dibromochloromethane	ND		1.0		ug/L			06/16/17 00:20	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/16/17 00:20	1
Ethylbenzene	ND		1.0		ug/L			06/16/17 00:20	1
Methylene Chloride	ND		5.0		ug/L			06/16/17 00:20	1
Naphthalene	ND		5.0		ug/L			06/16/17 00:20	1
Styrene	ND		1.0		ug/L			06/16/17 00:20	1
Tetrachloroethene	ND		1.0		ug/L			06/16/17 00:20	1
Toluene	ND		1.0		ug/L			06/16/17 00:20	1
Trichloroethene	9.0		1.0		ug/L			06/16/17 00:20	1
Trichlorofluoromethane	ND		1.0		ug/L			06/16/17 00:20	1
Vinyl chloride	ND		1.0		ug/L			06/16/17 00:20	1
Xylenes, Total	ND		2.0		ug/L			06/16/17 00:20	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 00:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		79 - 119					06/16/17 00:20	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 130					06/16/17 00:20	1
4-Bromofluorobenzene (Surr)	97		71 - 121					06/16/17 00:20	1
Dibromofluoromethane (Surr)	101		77 - 129					06/16/17 00:20	1

Client Sample ID: M27Z9

Date Collected: 06/05/17 14:05

Date Received: 06/07/17 09:43

Lab Sample ID: 680-139603-5

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/16/17 00:42	1
1,1-Dichloroethane	ND		1.0		ug/L			06/16/17 00:42	1
1,1-Dichloroethene	8.3		1.0		ug/L			06/16/17 00:42	1
1,2-Dichloropropane	ND		1.0		ug/L			06/16/17 00:42	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/16/17 00:42	1
Bromodichloromethane	ND		1.0		ug/L			06/16/17 00:42	1
Chloroform	ND		1.0		ug/L			06/16/17 00:42	1
Chloromethane	ND		1.0		ug/L			06/16/17 00:42	1
cis-1,2-Dichloroethene	2.6		1.0		ug/L			06/16/17 00:42	1
Dibromochloromethane	ND		1.0		ug/L			06/16/17 00:42	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/16/17 00:42	1
Ethylbenzene	ND		1.0		ug/L			06/16/17 00:42	1
Methylene Chloride	ND		5.0		ug/L			06/16/17 00:42	1
Naphthalene	ND		5.0		ug/L			06/16/17 00:42	1
Styrene	ND		1.0		ug/L			06/16/17 00:42	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Client Sample ID: M27Z9

Date Collected: 06/05/17 14:05

Date Received: 06/07/17 09:43

Lab Sample ID: 680-139603-5

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	3.1		1.0		ug/L			06/16/17 00:42	1
Toluene	ND		1.0		ug/L			06/16/17 00:42	1
Trichloroethene	63		1.0		ug/L			06/16/17 00:42	1
Trichlorofluoromethane	ND		1.0		ug/L			06/16/17 00:42	1
Vinyl chloride	ND		1.0		ug/L			06/16/17 00:42	1
Xylenes, Total	ND		2.0		ug/L			06/16/17 00:42	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 00:42	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101			79 - 119				06/16/17 00:42	1
1,2-Dichloroethane-d4 (Surr)	101			70 - 130				06/16/17 00:42	1
4-Bromofluorobenzene (Surr)	96			71 - 121				06/16/17 00:42	1
Dibromofluoromethane (Surr)	104			77 - 129				06/16/17 00:42	1

Client Sample ID: TB060617 lot 041317

Lab Sample ID: 680-139603-6

Matrix: Water

Date Collected: 06/06/17 00:00

Date Received: 06/07/17 09:43

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/15/17 19:57	1
1,1-Dichloroethane	ND		1.0		ug/L			06/15/17 19:57	1
1,1-Dichloroethene	ND		1.0		ug/L			06/15/17 19:57	1
1,2-Dichloropropane	ND		1.0		ug/L			06/15/17 19:57	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/15/17 19:57	1
Bromodichloromethane	ND		1.0		ug/L			06/15/17 19:57	1
Chloroform	ND		1.0		ug/L			06/15/17 19:57	1
Chloromethane	ND		1.0		ug/L			06/15/17 19:57	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/15/17 19:57	1
Dibromochloromethane	ND		1.0		ug/L			06/15/17 19:57	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/15/17 19:57	1
Ethylbenzene	ND		1.0		ug/L			06/15/17 19:57	1
Methylene Chloride	ND		5.0		ug/L			06/15/17 19:57	1
Naphthalene	ND		5.0		ug/L			06/15/17 19:57	1
Styrene	ND		1.0		ug/L			06/15/17 19:57	1
Tetrachloroethene	ND		1.0		ug/L			06/15/17 19:57	1
Toluene	ND		1.0		ug/L			06/15/17 19:57	1
Trichloroethene	ND		1.0		ug/L			06/15/17 19:57	1
Trichlorofluoromethane	ND		1.0		ug/L			06/15/17 19:57	1
Vinyl chloride	ND		1.0		ug/L			06/15/17 19:57	1
Xylenes, Total	ND		2.0		ug/L			06/15/17 19:57	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/15/17 19:57	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103			79 - 119				06/15/17 19:57	1
1,2-Dichloroethane-d4 (Surr)	101			70 - 130				06/15/17 19:57	1
4-Bromofluorobenzene (Surr)	94			71 - 121				06/15/17 19:57	1
Dibromofluoromethane (Surr)	103			77 - 129				06/15/17 19:57	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Client Sample ID: M17Z1

Date Collected: 06/06/17 10:04

Date Received: 06/07/17 09:43

Lab Sample ID: 680-139603-7

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/16/17 01:03	1
1,1-Dichloroethane	ND		1.0		ug/L			06/16/17 01:03	1
1,1-Dichloroethene	ND		1.0		ug/L			06/16/17 01:03	1
1,2-Dichloropropane	ND		1.0		ug/L			06/16/17 01:03	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/16/17 01:03	1
Bromodichloromethane	ND		1.0		ug/L			06/16/17 01:03	1
Chloroform	ND		1.0		ug/L			06/16/17 01:03	1
Chloromethane	ND		1.0		ug/L			06/16/17 01:03	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 01:03	1
Dibromochloromethane	ND		1.0		ug/L			06/16/17 01:03	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/16/17 01:03	1
Ethylbenzene	ND		1.0		ug/L			06/16/17 01:03	1
Methylene Chloride	ND		5.0		ug/L			06/16/17 01:03	1
Naphthalene	ND		5.0		ug/L			06/16/17 01:03	1
Styrene	ND		1.0		ug/L			06/16/17 01:03	1
Tetrachloroethene	ND		1.0		ug/L			06/16/17 01:03	1
Toluene	ND		1.0		ug/L			06/16/17 01:03	1
Trichloroethene	7.4		1.0		ug/L			06/16/17 01:03	1
Trichlorofluoromethane	ND		1.0		ug/L			06/16/17 01:03	1
Vinyl chloride	ND		1.0		ug/L			06/16/17 01:03	1
Xylenes, Total	ND		2.0		ug/L			06/16/17 01:03	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 01:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		79 - 119					06/16/17 01:03	1
1,2-Dichloroethane-d4 (Surr)	100		70 - 130					06/16/17 01:03	1
4-Bromofluorobenzene (Surr)	95		71 - 121					06/16/17 01:03	1
Dibromofluoromethane (Surr)	103		77 - 129					06/16/17 01:03	1

Client Sample ID: M17Z4

Date Collected: 06/06/17 10:48

Date Received: 06/07/17 09:43

Lab Sample ID: 680-139603-8

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/16/17 01:25	1
1,1-Dichloroethane	ND		1.0		ug/L			06/16/17 01:25	1
1,1-Dichloroethene	ND		1.0		ug/L			06/16/17 01:25	1
1,2-Dichloropropane	ND		1.0		ug/L			06/16/17 01:25	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/16/17 01:25	1
Bromodichloromethane	ND		1.0		ug/L			06/16/17 01:25	1
Chloroform	ND		1.0		ug/L			06/16/17 01:25	1
Chloromethane	ND		1.0		ug/L			06/16/17 01:25	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 01:25	1
Dibromochloromethane	ND		1.0		ug/L			06/16/17 01:25	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/16/17 01:25	1
Ethylbenzene	ND		1.0		ug/L			06/16/17 01:25	1
Methylene Chloride	ND		5.0		ug/L			06/16/17 01:25	1
Naphthalene	ND		5.0		ug/L			06/16/17 01:25	1
Styrene	ND		1.0		ug/L			06/16/17 01:25	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Client Sample ID: M17Z4

Date Collected: 06/06/17 10:48

Date Received: 06/07/17 09:43

Lab Sample ID: 680-139603-8

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		1.0		ug/L			06/16/17 01:25	1
Toluene	ND		1.0		ug/L			06/16/17 01:25	1
Trichloroethene	6.1		1.0		ug/L			06/16/17 01:25	1
Trichlorofluoromethane	ND		1.0		ug/L			06/16/17 01:25	1
Vinyl chloride	ND		1.0		ug/L			06/16/17 01:25	1
Xylenes, Total	ND		2.0		ug/L			06/16/17 01:25	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 01:25	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103			79 - 119				06/16/17 01:25	1
1,2-Dichloroethane-d4 (Surr)	100			70 - 130				06/16/17 01:25	1
4-Bromofluorobenzene (Surr)	99			71 - 121				06/16/17 01:25	1
Dibromofluoromethane (Surr)	103			77 - 129				06/16/17 01:25	1

Client Sample ID: M17Z6

Date Collected: 06/06/17 11:28

Date Received: 06/07/17 09:43

Lab Sample ID: 680-139603-9

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/16/17 01:47	1
1,1-Dichloroethane	ND		1.0		ug/L			06/16/17 01:47	1
1,1-Dichloroethene	ND		1.0		ug/L			06/16/17 01:47	1
1,2-Dichloropropane	ND		1.0		ug/L			06/16/17 01:47	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/16/17 01:47	1
Bromodichloromethane	ND		1.0		ug/L			06/16/17 01:47	1
Chloroform	1.6		1.0		ug/L			06/16/17 01:47	1
Chloromethane	ND		1.0		ug/L			06/16/17 01:47	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 01:47	1
Dibromochloromethane	ND		1.0		ug/L			06/16/17 01:47	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/16/17 01:47	1
Ethylbenzene	ND		1.0		ug/L			06/16/17 01:47	1
Methylene Chloride	ND		5.0		ug/L			06/16/17 01:47	1
Naphthalene	ND		5.0		ug/L			06/16/17 01:47	1
Styrene	ND		1.0		ug/L			06/16/17 01:47	1
Tetrachloroethene	ND		1.0		ug/L			06/16/17 01:47	1
Toluene	ND		1.0		ug/L			06/16/17 01:47	1
Trichloroethene	2.1		1.0		ug/L			06/16/17 01:47	1
Trichlorofluoromethane	ND		1.0		ug/L			06/16/17 01:47	1
Vinyl chloride	ND		1.0		ug/L			06/16/17 01:47	1
Xylenes, Total	ND		2.0		ug/L			06/16/17 01:47	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 01:47	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99			79 - 119				06/16/17 01:47	1
1,2-Dichloroethane-d4 (Surr)	99			70 - 130				06/16/17 01:47	1
4-Bromofluorobenzene (Surr)	97			71 - 121				06/16/17 01:47	1
Dibromofluoromethane (Surr)	103			77 - 129				06/16/17 01:47	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Client Sample ID: M17Z8

Date Collected: 06/06/17 12:12

Date Received: 06/07/17 09:43

Lab Sample ID: 680-139603-10

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/16/17 02:09	1
1,1-Dichloroethane	ND		1.0		ug/L			06/16/17 02:09	1
1,1-Dichloroethene	ND		1.0		ug/L			06/16/17 02:09	1
1,2-Dichloropropane	ND		1.0		ug/L			06/16/17 02:09	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/16/17 02:09	1
Bromodichloromethane	ND		1.0		ug/L			06/16/17 02:09	1
Chloroform	2.9		1.0		ug/L			06/16/17 02:09	1
Chloromethane	ND		1.0		ug/L			06/16/17 02:09	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 02:09	1
Dibromochloromethane	ND		1.0		ug/L			06/16/17 02:09	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/16/17 02:09	1
Ethylbenzene	ND		1.0		ug/L			06/16/17 02:09	1
Methylene Chloride	ND		5.0		ug/L			06/16/17 02:09	1
Naphthalene	ND		5.0		ug/L			06/16/17 02:09	1
Styrene	ND		1.0		ug/L			06/16/17 02:09	1
Tetrachloroethene	ND		1.0		ug/L			06/16/17 02:09	1
Toluene	ND		1.0		ug/L			06/16/17 02:09	1
Trichloroethene	1.3		1.0		ug/L			06/16/17 02:09	1
Trichlorofluoromethane	ND		1.0		ug/L			06/16/17 02:09	1
Vinyl chloride	ND		1.0		ug/L			06/16/17 02:09	1
Xylenes, Total	ND		2.0		ug/L			06/16/17 02:09	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 02:09	1
Surrogate				%Recovery		Qualifier		Limits	
Toluene-d8 (Surr)			98			79 - 119			
1,2-Dichloroethane-d4 (Surr)			100			70 - 130			
4-Bromofluorobenzene (Surr)			94			71 - 121			
Dibromofluoromethane (Surr)			104			77 - 129			
						Prepared		Analyzed	
						06/16/17 02:09			

TestAmerica Savannah

Surrogate Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TOL (79-119)	12DCE (70-130)	BFB (71-121)	DBFM (77-129)
680-139603-1	TB060517 lot 041317	100	97	100	99
680-139603-2	M5Z5	101	100	96	106
680-139603-3	M5Z7	101	99	94	104
680-139603-4	M5Z10	99	98	97	101
680-139603-5	M27Z9	101	101	96	104
680-139603-6	TB060617 lot 041317	103	101	94	103
680-139603-7	M17Z1	100	100	95	103
680-139603-8	M17Z4	103	100	99	103
680-139603-9	M17Z6	99	99	97	103
680-139603-10	M17Z8	98	100	94	104
LCS 680-483552/3	Lab Control Sample	99	95	96	97
LCS 680-484163/3	Lab Control Sample	94	94	89	99
LCSD 680-483552/4	Lab Control Sample Dup	97	93	95	97
LCSD 680-484163/4	Lab Control Sample Dup	92	90	84	95
MB 680-483552/6	Method Blank	99	100	100	101
MB 680-484163/7	Method Blank	99	101	95	102

Surrogate Legend

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-483552/6

Matrix: Water

Analysis Batch: 483552

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
1,1,1-Trichloroethane	ND				1.0		ug/L			06/12/17 16:07	1
1,1-Dichloroethane	ND				1.0		ug/L			06/12/17 16:07	1
1,1-Dichloroethene	ND				1.0		ug/L			06/12/17 16:07	1
1,2-Dichloropropane	ND				1.0		ug/L			06/12/17 16:07	1
1,4-Dichlorobenzene	ND				1.0		ug/L			06/12/17 16:07	1
Bromodichloromethane	ND				1.0		ug/L			06/12/17 16:07	1
Chloroform	ND				1.0		ug/L			06/12/17 16:07	1
Chloromethane	ND				1.0		ug/L			06/12/17 16:07	1
cis-1,2-Dichloroethene	ND				1.0		ug/L			06/12/17 16:07	1
Dibromochloromethane	ND				1.0		ug/L			06/12/17 16:07	1
Dichlorodifluoromethane	ND				1.0		ug/L			06/12/17 16:07	1
Ethylbenzene	ND				1.0		ug/L			06/12/17 16:07	1
Methylene Chloride	ND				5.0		ug/L			06/12/17 16:07	1
Naphthalene	ND				5.0		ug/L			06/12/17 16:07	1
Styrene	ND				1.0		ug/L			06/12/17 16:07	1
Tetrachloroethene	ND				1.0		ug/L			06/12/17 16:07	1
Toluene	ND				1.0		ug/L			06/12/17 16:07	1
Trichloroethene	ND				1.0		ug/L			06/12/17 16:07	1
Trichlorofluoromethane	ND				1.0		ug/L			06/12/17 16:07	1
Vinyl chloride	ND				1.0		ug/L			06/12/17 16:07	1
Xylenes, Total	ND				2.0		ug/L			06/12/17 16:07	1
trans-1,2-Dichloroethene	ND				1.0		ug/L			06/12/17 16:07	1

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Toluene-d8 (Surr)	99		99		79 - 119		06/12/17 16:07	1
1,2-Dichloroethane-d4 (Surr)	100		100		70 - 130		06/12/17 16:07	1
4-Bromofluorobenzene (Surr)	100		100		71 - 121		06/12/17 16:07	1
Dibromofluoromethane (Surr)	101		101		77 - 129		06/12/17 16:07	1

Lab Sample ID: LCS 680-483552/3

Matrix: Water

Analysis Batch: 483552

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MB	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier	Unit				
1,1,1-Trichloroethane	20.0	20.2		ug/L		101	52 - 162	
1,1-Dichloroethane	20.0	19.8		ug/L		99	59 - 155	
1,1-Dichloroethene	20.0	19.8		ug/L		99	1 - 234	
1,2-Dichloropropane	20.0	19.9		ug/L		99	1 - 210	
1,4-Dichlorobenzene	20.0	19.4		ug/L		97	18 - 190	
Bromodichloromethane	20.0	19.3		ug/L		97	35 - 155	
Chloroform	20.0	19.6		ug/L		98	51 - 138	
Chloromethane	20.0	21.2		ug/L		106	1 - 273	
cis-1,2-Dichloroethene	20.0	19.8		ug/L		99	60 - 131	
Dibromochloromethane	20.0	19.9		ug/L		99	53 - 149	
Dichlorodifluoromethane	20.0	23.9		ug/L		120	70 - 130	
Ethylbenzene	20.0	20.0		ug/L		100	37 - 162	
Methylene Chloride	20.0	19.3		ug/L		96	1 - 221	
Naphthalene	20.0	20.6		ug/L		103	58 - 143	

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

TestAmerica Job ID: 680-139603-1

Project/Site: VA Public Supply Wells (Quarterly)

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-483552/3

Matrix: Water

Analysis Batch: 483552

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS			Unit	D	%Rec	%Rec.
		Result	Qualifier	Limits				
Styrene	20.0	20.1		ug/L		101	50 - 150	
Tetrachloroethene	20.0	21.2		ug/L		106	64 - 148	
Toluene	20.0	20.1		ug/L		101	47 - 150	
Trichloroethene	20.0	20.6		ug/L		103	71 - 157	
Trichlorofluoromethane	20.0	20.4		ug/L		102	17 - 181	
Vinyl chloride	20.0	20.9		ug/L		104	1 - 251	
Xylenes, Total	40.0	39.8		ug/L		100	78 - 119	
trans-1,2-Dichloroethene	20.0	20.2		ug/L		101	54 - 156	

LCS LCS

Surrogate	%Recovery	LCS		Limits
		Qualifier	Limits	
Toluene-d8 (Surr)	99		79 - 119	
1,2-Dichloroethane-d4 (Surr)	95		70 - 130	
4-Bromofluorobenzene (Surr)	96		71 - 121	
Dibromofluoromethane (Surr)	97		77 - 129	

Lab Sample ID: LCSD 680-483552/4

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analysis Batch: 483552

Analyte	Spike Added	LCSD			Unit	D	%Rec	%Rec.	RPD	Limit
		Result	Qualifier	Limits						
1,1,1-Trichloroethane	20.0	19.6		ug/L		98	52 - 162	3	30	
1,1-Dichloroethane	20.0	19.3		ug/L		96	59 - 155	3	30	
1,1-Dichloroethene	20.0	19.7		ug/L		99	1 - 234	0	30	
1,2-Dichloropropane	20.0	19.8		ug/L		99	1 - 210	0	30	
1,4-Dichlorobenzene	20.0	19.1		ug/L		96	18 - 190	1	30	
Bromodichloromethane	20.0	19.3		ug/L		96	35 - 155	0	30	
Chloroform	20.0	19.4		ug/L		97	51 - 138	1	30	
Chloromethane	20.0	21.4		ug/L		107	1 - 273	1	50	
cis-1,2-Dichloroethene	20.0	19.3		ug/L		97	60 - 131	2	30	
Dibromochloromethane	20.0	19.6		ug/L		98	53 - 149	2	30	
Dichlorodifluoromethane	20.0	23.7		ug/L		118	70 - 130	1	30	
Ethylbenzene	20.0	19.4		ug/L		97	37 - 162	3	30	
Methylene Chloride	20.0	19.2		ug/L		96	1 - 221	1	30	
Naphthalene	20.0	19.4		ug/L		97	58 - 143	6	30	
Styrene	20.0	19.5		ug/L		98	50 - 150	3	30	
Tetrachloroethene	20.0	20.6		ug/L		103	64 - 148	3	30	
Toluene	20.0	19.7		ug/L		99	47 - 150	2	30	
Trichloroethene	20.0	20.2		ug/L		101	71 - 157	2	30	
Trichlorofluoromethane	20.0	20.4		ug/L		102	17 - 181	0	30	
Vinyl chloride	20.0	20.7		ug/L		103	1 - 251	1	50	
Xylenes, Total	40.0	38.5		ug/L		96	78 - 119	3	30	
trans-1,2-Dichloroethene	20.0	19.4		ug/L		97	54 - 156	4	30	

LCSD LCSD

Surrogate	%Recovery	LCSD		Limits
		Qualifier	Limits	
Toluene-d8 (Surr)	97		79 - 119	
1,2-Dichloroethane-d4 (Surr)	93		70 - 130	
4-Bromofluorobenzene (Surr)	95		71 - 121	

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-483552/4

Matrix: Water

Analysis Batch: 483552

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	97		77 - 129

Lab Sample ID: MB 680-484163/7

Matrix: Water

Analysis Batch: 484163

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/15/17 19:36	1
1,1-Dichloroethane	ND		1.0		ug/L			06/15/17 19:36	1
1,1-Dichloroethene	ND		1.0		ug/L			06/15/17 19:36	1
1,2-Dichloropropane	ND		1.0		ug/L			06/15/17 19:36	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/15/17 19:36	1
Bromodichloromethane	ND		1.0		ug/L			06/15/17 19:36	1
Chloroform	ND		1.0		ug/L			06/15/17 19:36	1
Chloromethane	ND		1.0		ug/L			06/15/17 19:36	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/15/17 19:36	1
Dibromochloromethane	ND		1.0		ug/L			06/15/17 19:36	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/15/17 19:36	1
Ethylbenzene	ND		1.0		ug/L			06/15/17 19:36	1
Methylene Chloride	ND		5.0		ug/L			06/15/17 19:36	1
Naphthalene	ND		5.0		ug/L			06/15/17 19:36	1
Styrene	ND		1.0		ug/L			06/15/17 19:36	1
Tetrachloroethene	ND		1.0		ug/L			06/15/17 19:36	1
Toluene	ND		1.0		ug/L			06/15/17 19:36	1
Trichloroethene	ND		1.0		ug/L			06/15/17 19:36	1
Trichlorofluoromethane	ND		1.0		ug/L			06/15/17 19:36	1
Vinyl chloride	ND		1.0		ug/L			06/15/17 19:36	1
Xylenes, Total	ND		2.0		ug/L			06/15/17 19:36	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/15/17 19:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		79 - 119		06/15/17 19:36	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		06/15/17 19:36	1
4-Bromofluorobenzene (Surr)	95		71 - 121		06/15/17 19:36	1
Dibromofluoromethane (Surr)	102		77 - 129		06/15/17 19:36	1

Lab Sample ID: LCS 680-484163/3

Matrix: Water

Analysis Batch: 484163

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
1,1,1-Trichloroethane	20.0	20.4		ug/L		102	52 - 162
1,1-Dichloroethane	20.0	17.0		ug/L		85	59 - 155
1,1-Dichloroethene	20.0	19.3		ug/L		97	1 - 234
1,2-Dichloropropane	20.0	16.6		ug/L		83	1 - 210
1,4-Dichlorobenzene	20.0	18.8		ug/L		94	18 - 190
Bromodichloromethane	20.0	17.5		ug/L		88	35 - 155
Chloroform	20.0	19.0		ug/L		95	51 - 138

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

TestAmerica Job ID: 680-139603-1

Project/Site: VA Public Supply Wells (Quarterly)

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-484163/3

Matrix: Water

Analysis Batch: 484163

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS		Unit	D	%Rec	%Rec.
	Added	Result	Qualifier				
Chloromethane	20.0	14.2		ug/L		71	1 - 273
cis-1,2-Dichloroethene	20.0	20.2		ug/L		101	60 - 131
Dibromochloromethane	20.0	17.8		ug/L		89	53 - 149
Dichlorodifluoromethane	20.0	17.7		ug/L		89	70 - 130
Ethylbenzene	20.0	20.7		ug/L		103	37 - 162
Methylene Chloride	20.0	17.9		ug/L		89	1 - 221
Naphthalene	20.0	16.4		ug/L		82	58 - 143
Styrene	20.0	20.8		ug/L		104	50 - 150
Tetrachloroethene	20.0	22.3		ug/L		112	64 - 148
Toluene	20.0	18.4		ug/L		92	47 - 150
Trichloroethene	20.0	20.1		ug/L		101	71 - 157
Trichlorofluoromethane	20.0	19.1		ug/L		96	17 - 181
Vinyl chloride	20.0	16.7		ug/L		84	1 - 251
Xylenes, Total	40.0	42.6		ug/L		107	78 - 119
trans-1,2-Dichloroethene	20.0	19.1		ug/L		95	54 - 156

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	94		79 - 119
1,2-Dichloroethane-d4 (Surr)	94		70 - 130
4-Bromofluorobenzene (Surr)	89		71 - 121
Dibromofluoromethane (Surr)	99		77 - 129

Lab Sample ID: LCSD 680-484163/4

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 484163

Analyte	Spike	LCSD		Unit	D	%Rec	%Rec.	RPD	RPD Limit
	Added	Result	Qualifier						
1,1,1-Trichloroethane	20.0	19.1		ug/L		95	52 - 162	7	30
1,1-Dichloroethane	20.0	16.1		ug/L		81	59 - 155	6	30
1,1-Dichloroethene	20.0	18.0		ug/L		90	1 - 234	7	30
1,2-Dichloropropane	20.0	15.5		ug/L		77	1 - 210	7	30
1,4-Dichlorobenzene	20.0	18.0		ug/L		90	18 - 190	4	30
Bromodichloromethane	20.0	16.3		ug/L		82	35 - 155	7	30
Chloroform	20.0	18.0		ug/L		90	51 - 138	5	30
Chloromethane	20.0	13.3		ug/L		67	1 - 273	6	50
cis-1,2-Dichloroethene	20.0	18.3		ug/L		92	60 - 131	10	30
Dibromochloromethane	20.0	16.9		ug/L		84	53 - 149	6	30
Dichlorodifluoromethane	20.0	16.4		ug/L		82	70 - 130	8	30
Ethylbenzene	20.0	18.7		ug/L		93	37 - 162	10	30
Methylene Chloride	20.0	16.0		ug/L		80	1 - 221	11	30
Naphthalene	20.0	15.8		ug/L		79	58 - 143	3	30
Styrene	20.0	18.9		ug/L		95	50 - 150	9	30
Tetrachloroethene	20.0	20.4		ug/L		102	64 - 148	9	30
Toluene	20.0	17.2		ug/L		86	47 - 150	7	30
Trichloroethene	20.0	19.2		ug/L		96	71 - 157	4	30
Trichlorofluoromethane	20.0	17.8		ug/L		89	17 - 181	7	30
Vinyl chloride	20.0	15.5		ug/L		78	1 - 251	7	50
Xylenes, Total	40.0	38.9		ug/L		97	78 - 119	9	30

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

TestAmerica Job ID: 680-139603-1

Project/Site: VA Public Supply Wells (Quarterly)

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-484163/4

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 484163

Analyte		Spike	LCSD	LCSD	Unit	D	%Rec.	Limits	RPD	RPD	Limit
		Added	Result	Qualifier							
trans-1,2-Dichloroethene		20.0	18.3		ug/L		92	54 - 156	4		30

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	92		79 - 119
1,2-Dichloroethane-d4 (Surr)	90		70 - 130
4-Bromofluorobenzene (Surr)	84		71 - 121
Dibromofluoromethane (Surr)	95		77 - 129

TestAmerica Savannah

QC Association Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

GC/MS VOA

Analysis Batch: 483552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-139603-1	TB060517 lot 041317	Total/NA	Water	624	
MB 680-483552/6	Method Blank	Total/NA	Water	624	
LCS 680-483552/3	Lab Control Sample	Total/NA	Water	624	
LCSD 680-483552/4	Lab Control Sample Dup	Total/NA	Water	624	

Analysis Batch: 484163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-139603-2	M5Z5	Total/NA	Water	624	
680-139603-3	M5Z7	Total/NA	Water	624	
680-139603-4	M5Z10	Total/NA	Water	624	
680-139603-5	M27Z9	Total/NA	Water	624	
680-139603-6	TB060617 lot 041317	Total/NA	Water	624	
680-139603-7	M17Z1	Total/NA	Water	624	
680-139603-8	M17Z4	Total/NA	Water	624	
680-139603-9	M17Z6	Total/NA	Water	624	
680-139603-10	M17Z8	Total/NA	Water	624	
MB 680-484163/7	Method Blank	Total/NA	Water	624	
LCS 680-484163/3	Lab Control Sample	Total/NA	Water	624	
LCSD 680-484163/4	Lab Control Sample Dup	Total/NA	Water	624	

Lab Chronicle

Client: Unisys Corporation
 Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Client Sample ID: TB060517 lot 041317

Lab Sample ID: 680-139603-1

Matrix: Water

Date Collected: 06/05/17 00:00
 Date Received: 06/07/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	483552	06/12/17 18:03	CMB	TAL SAV

Instrument ID: CMSC

Client Sample ID: M5Z5

Lab Sample ID: 680-139603-2

Matrix: Water

Date Collected: 06/05/17 10:45
 Date Received: 06/07/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484163	06/15/17 23:36	CMB	TAL SAV

Instrument ID: CMSA2

Client Sample ID: M5Z7

Lab Sample ID: 680-139603-3

Matrix: Water

Date Collected: 06/05/17 11:28
 Date Received: 06/07/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484163	06/15/17 23:58	CMB	TAL SAV

Instrument ID: CMSA2

Client Sample ID: M5Z10

Lab Sample ID: 680-139603-4

Matrix: Water

Date Collected: 06/05/17 12:17
 Date Received: 06/07/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484163	06/16/17 00:20	CMB	TAL SAV

Instrument ID: CMSA2

Client Sample ID: M27Z9

Lab Sample ID: 680-139603-5

Matrix: Water

Date Collected: 06/05/17 14:05
 Date Received: 06/07/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484163	06/16/17 00:42	CMB	TAL SAV

Instrument ID: CMSA2

Client Sample ID: TB060617 lot 041317

Lab Sample ID: 680-139603-6

Matrix: Water

Date Collected: 06/06/17 00:00
 Date Received: 06/07/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484163	06/15/17 19:57	CMB	TAL SAV

Instrument ID: CMSA2

TestAmerica Savannah

Lab Chronicle

Client: Unisys Corporation
Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Client Sample ID: M17Z1

Date Collected: 06/06/17 10:04
Date Received: 06/07/17 09:43

Lab Sample ID: 680-139603-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484163	06/16/17 01:03	CMB	TAL SAV

Client Sample ID: M17Z4

Date Collected: 06/06/17 10:48
Date Received: 06/07/17 09:43

Lab Sample ID: 680-139603-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484163	06/16/17 01:25	CMB	TAL SAV

Client Sample ID: M17Z6

Date Collected: 06/06/17 11:28
Date Received: 06/07/17 09:43

Lab Sample ID: 680-139603-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484163	06/16/17 01:47	CMB	TAL SAV

Client Sample ID: M17Z8

Date Collected: 06/06/17 12:12
Date Received: 06/07/17 09:43

Lab Sample ID: 680-139603-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484163	06/16/17 02:09	CMB	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TestAmerica

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

THE LEADER IN ENVIRONMENTAL TESTING

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSIS		PAGE /	OF /	
				CONTRACT NO.				
VA Public Supply Nville	680/0783	P.R.						
TAL (LAB) PROJECT MANAGER	P.O. NUMBER							
Jerry Bauer	CLIENT PHONE	CLIENT FAX						
Miquid Custo	610-614-2251	651-635-3619						
CLIENT NAME	CLIENT E-MAIL							
Kaitlin House	Kaitlin.House@Univip.com							
CLIENT ADDRESS	2476 Sweetser Road Malvern, PA 19355							
COMPANY CONTRACTING THIS WORK (if applicable)	Univip/VASC							
SAMPLE	SAMPLE IDENTIFICATION							
DATE	TIME							
—	—	TB060517 lot 041317 *	6V	3				
6-05-17	1045	U525	6V	3				
6-05-17	1128	U527	6V	3				
6-05-17	1217	U5210	6V	3				
6-05-17	1405	U2729	6V	3				
—	—	TB060617 lot 041317 *	6V	3				
6-06-17	1004	M1721	6V	3				
6-06-17	1048	M1724	6V	3				
6-06-17	1128	M1726	6V	3				
6-06-17	1212	M1728	6V	3				
RELINQUISHED BY: (SIGNATURE) <i>Jeff Wata</i>	DATE 6-6-17	TIME 1355	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE)	DATE 6-7-17	TIME 945	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
LABORATORY USE ONLY								
RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE 6-7-17	TIME 945	CUSTODY INTACT YES <input checked="" type="radio"/> NO <input type="radio"/>	SAVANNAH LOG NO. C-0033	LABORATORY REMARKS			

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Login Sample Receipt Checklist

Client: Unisys Corporation

Job Number: 680-139603-1

Login Number: 139603

List Source: TestAmerica Savannah

List Number: 1

Creator: Flanagan, Naomi V

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Quarterly)

TestAmerica Job ID: 680-139603-1

Laboratory: TestAmerica Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Puerto Rico	State Program	2	GA00006	12-31-17

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**GROUNDWATER ANALYTICAL SAMPLES
ORGANIC ANALYSIS – VOLATILES IN WATER
TestAmerica Savannah Job No. 680-139744
Samples Collected June 8, 2017**



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-139744-1

Client Project/Site: VA Public Supply Wells

For:

Unisys Corporation

Vega Alta Trust c/o Unisys Corporation

2476 Swedesford Road

Malvern, Pennsylvania 19355

Attn: Mr. Martin Howe

Kathryn Smith

Authorized for release by:

6/27/2017 2:26:15 PM

Kathryn Smith, Manager of Project Management

(912)354-7858

kathy.smith@testamericainc.com

Designee for

Jerry Lanier, Project Manager I

(912)354-7858 e.3410

jerry.lanier@testamericainc.com

LINKS

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Unisys Corporation
Project/Site: VA Public Supply Wells

TestAmerica Job ID: 680-139744-1

Job ID: 680-139744-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: Unisys Corporation

Project: VA Public Supply Wells

Report Number: 680-139744-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 06/09/2017; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 0.9° C.

Receipt Exceptions

The following sample was received with headspace in: TB060817 Lot 041317 (680-139744-1). Client indicated the trip blank vials have headspace on the COC.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB060817 Lot 041317 (680-139744-1) and M12Z6 (680-139744-2) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA Method 624. The samples were analyzed on 06/16/2017.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-484275.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Sample Summary

Client: Unisys Corporation
Project/Site: VA Public Supply Wells

TestAmerica Job ID: 680-139744-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-139744-1	TB060817 Lot 041317	Water	06/08/17 00:00	06/09/17 09:23
680-139744-2	M12Z6	Water	06/08/17 10:07	06/09/17 09:23

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Method Summary

Client: Unisys Corporation
Project/Site: VA Public Supply Wells

TestAmerica Job ID: 680-139744-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL SAV

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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Definitions/Glossary

Client: Unisys Corporation
Project/Site: VA Public Supply Wells

TestAmerica Job ID: 680-139744-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Unisys Corporation
Project/Site: VA Public Supply Wells

TestAmerica Job ID: 680-139744-1

Client Sample ID: TB060817 Lot 041317

Lab Sample ID: 680-139744-1

No Detections.

Client Sample ID: M12Z6

Lab Sample ID: 680-139744-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	3.3		1.0		ug/L	1	624		Total/NA
Trichloroethene	1.1		1.0		ug/L	1	624		Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation
Project/Site: VA Public Supply Wells

TestAmerica Job ID: 680-139744-1

Client Sample ID: TB060817 Lot 041317

Lab Sample ID: 680-139744-1

Matrix: Water

Date Collected: 06/08/17 00:00

Date Received: 06/09/17 09:23

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/16/17 15:49	1
1,1-Dichloroethane	ND		1.0		ug/L			06/16/17 15:49	1
1,1-Dichloroethene	ND		1.0		ug/L			06/16/17 15:49	1
1,2-Dichloropropane	ND		1.0		ug/L			06/16/17 15:49	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/16/17 15:49	1
Bromodichloromethane	ND		1.0		ug/L			06/16/17 15:49	1
Chloroform	ND		1.0		ug/L			06/16/17 15:49	1
Chloromethane	ND		1.0		ug/L			06/16/17 15:49	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 15:49	1
Dibromochloromethane	ND		1.0		ug/L			06/16/17 15:49	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/16/17 15:49	1
Ethylbenzene	ND		1.0		ug/L			06/16/17 15:49	1
Methylene Chloride	ND		5.0		ug/L			06/16/17 15:49	1
Naphthalene	ND		5.0		ug/L			06/16/17 15:49	1
Styrene	ND		1.0		ug/L			06/16/17 15:49	1
Tetrachloroethene	ND		1.0		ug/L			06/16/17 15:49	1
Toluene	ND		1.0		ug/L			06/16/17 15:49	1
Trichloroethene	ND		1.0		ug/L			06/16/17 15:49	1
Trichlorofluoromethane	ND		1.0		ug/L			06/16/17 15:49	1
Vinyl chloride	ND		1.0		ug/L			06/16/17 15:49	1
Xylenes, Total	ND		2.0		ug/L			06/16/17 15:49	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 15:49	1
Surrogate				Prepared		Analyzed		Dil Fac	
Toluene-d8 (Surr)	103			79 - 119				06/16/17 15:49	
1,2-Dichloroethane-d4 (Surr)	98			70 - 130				06/16/17 15:49	
4-Bromofluorobenzene (Surr)	102			71 - 121				06/16/17 15:49	
Dibromofluoromethane (Surr)	101			77 - 129				06/16/17 15:49	

Client Sample ID: M12Z6

Lab Sample ID: 680-139744-2

Matrix: Water

Date Collected: 06/08/17 10:07

Date Received: 06/09/17 09:23

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/16/17 19:42	1
1,1-Dichloroethane	ND		1.0		ug/L			06/16/17 19:42	1
1,1-Dichloroethene	ND		1.0		ug/L			06/16/17 19:42	1
1,2-Dichloropropane	ND		1.0		ug/L			06/16/17 19:42	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/16/17 19:42	1
Bromodichloromethane	ND		1.0		ug/L			06/16/17 19:42	1
Chloroform	3.3		1.0		ug/L			06/16/17 19:42	1
Chloromethane	ND		1.0		ug/L			06/16/17 19:42	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 19:42	1
Dibromochloromethane	ND		1.0		ug/L			06/16/17 19:42	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/16/17 19:42	1
Ethylbenzene	ND		1.0		ug/L			06/16/17 19:42	1
Methylene Chloride	ND		5.0		ug/L			06/16/17 19:42	1
Naphthalene	ND		5.0		ug/L			06/16/17 19:42	1
Styrene	ND		1.0		ug/L			06/16/17 19:42	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation
 Project/Site: VA Public Supply Wells

TestAmerica Job ID: 680-139744-1

Client Sample ID: M12Z6

Date Collected: 06/08/17 10:07

Date Received: 06/09/17 09:23

Lab Sample ID: 680-139744-2

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		1.0		ug/L		06/16/17 19:42		1
Toluene	ND		1.0		ug/L		06/16/17 19:42		1
Trichloroethene	1.1		1.0		ug/L		06/16/17 19:42		1
Trichlorofluoromethane	ND		1.0		ug/L		06/16/17 19:42		1
Vinyl chloride	ND		1.0		ug/L		06/16/17 19:42		1
Xylenes, Total	ND		2.0		ug/L		06/16/17 19:42		1
trans-1,2-Dichloroethene	ND		1.0		ug/L		06/16/17 19:42		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Toluene-d8 (Surr)	103		79 - 119				06/16/17 19:42		1
1,2-Dichloroethane-d4 (Surr)	100		70 - 130				06/16/17 19:42		1
4-Bromofluorobenzene (Surr)	102		71 - 121				06/16/17 19:42		1
Dibromofluoromethane (Surr)	103		77 - 129				06/16/17 19:42		1

Surrogate Summary

Client: Unisys Corporation
Project/Site: VA Public Supply Wells

TestAmerica Job ID: 680-139744-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TOL (79-119)	12DCE (70-130)	BFB (71-121)	DBFM (77-129)				
680-139744-1	TB060817 Lot 041317	103	98	102	101				
680-139744-2	M12Z6	103	100	102	103				
LCS 680-484275/3	Lab Control Sample	95	97	95	96				
LCSD 680-484275/4	Lab Control Sample Dup	101	98	98	100				
MB 680-484275/7	Method Blank	104	111	102	108				

Surrogate Legend

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Unisys Corporation
Project/Site: VA Public Supply Wells

TestAmerica Job ID: 680-139744-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-484275/7

Matrix: Water

Analysis Batch: 484275

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
1,1,1-Trichloroethane	ND				1.0		ug/L			06/16/17 15:02	1
1,1-Dichloroethane	ND				1.0		ug/L			06/16/17 15:02	1
1,1-Dichloroethene	ND				1.0		ug/L			06/16/17 15:02	1
1,2-Dichloropropane	ND				1.0		ug/L			06/16/17 15:02	1
1,4-Dichlorobenzene	ND				1.0		ug/L			06/16/17 15:02	1
Bromodichloromethane	ND				1.0		ug/L			06/16/17 15:02	1
Chloroform	ND				1.0		ug/L			06/16/17 15:02	1
Chloromethane	ND				1.0		ug/L			06/16/17 15:02	1
cis-1,2-Dichloroethene	ND				1.0		ug/L			06/16/17 15:02	1
Dibromochloromethane	ND				1.0		ug/L			06/16/17 15:02	1
Dichlorodifluoromethane	ND				1.0		ug/L			06/16/17 15:02	1
Ethylbenzene	ND				1.0		ug/L			06/16/17 15:02	1
Methylene Chloride	ND				5.0		ug/L			06/16/17 15:02	1
Naphthalene	ND				5.0		ug/L			06/16/17 15:02	1
Styrene	ND				1.0		ug/L			06/16/17 15:02	1
Tetrachloroethene	ND				1.0		ug/L			06/16/17 15:02	1
Toluene	ND				1.0		ug/L			06/16/17 15:02	1
Trichloroethene	ND				1.0		ug/L			06/16/17 15:02	1
Trichlorofluoromethane	ND				1.0		ug/L			06/16/17 15:02	1
Vinyl chloride	ND				1.0		ug/L			06/16/17 15:02	1
Xylenes, Total	ND				2.0		ug/L			06/16/17 15:02	1
trans-1,2-Dichloroethene	ND				1.0		ug/L			06/16/17 15:02	1
Surrogate	MB	MB	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
	Result	Qualifier									
Toluene-d8 (Surr)	104		79 - 119						06/16/17 15:02	1	
1,2-Dichloroethane-d4 (Surr)	111		70 - 130						06/16/17 15:02	1	
4-Bromofluorobenzene (Surr)	102		71 - 121						06/16/17 15:02	1	
Dibromofluoromethane (Surr)	108		77 - 129						06/16/17 15:02	1	

Lab Sample ID: LCS 680-484275/3

Matrix: Water

Analysis Batch: 484275

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCs	LCS	Unit	D	%Rec	Limits	%Rec.
		Result	Qualifier					
1,1,1-Trichloroethane	20.0	18.7		ug/L		93	52 - 162	
1,1-Dichloroethane	20.0	18.9		ug/L		94	59 - 155	
1,1-Dichloroethene	20.0	18.5		ug/L		92	1 - 234	
1,2-Dichloropropane	20.0	19.4		ug/L		97	1 - 210	
1,4-Dichlorobenzene	20.0	19.4		ug/L		97	18 - 190	
Bromodichloromethane	20.0	18.9		ug/L		95	35 - 155	
Chloroform	20.0	19.1		ug/L		96	51 - 138	
Chloromethane	20.0	16.7		ug/L		84	1 - 273	
cis-1,2-Dichloroethene	20.0	19.3		ug/L		96	60 - 131	
Dibromochloromethane	20.0	19.3		ug/L		97	53 - 149	
Dichlorodifluoromethane	20.0	21.0		ug/L		105	70 - 130	
Ethylbenzene	20.0	19.3		ug/L		96	37 - 162	
Methylene Chloride	20.0	19.1		ug/L		95	1 - 221	
Naphthalene	20.0	22.1		ug/L		110	58 - 143	

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation
Project/Site: VA Public Supply Wells

TestAmerica Job ID: 680-139744-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-484275/3

Matrix: Water

Analysis Batch: 484275

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS			Unit	D	%Rec	%Rec.
		Result	Qualifier	Limits				
Styrene	20.0	20.1		ug/L		100	50 - 150	
Tetrachloroethene	20.0	19.6		ug/L		98	64 - 148	
Toluene	20.0	19.2		ug/L		96	47 - 150	
Trichloroethene	20.0	19.6		ug/L		98	71 - 157	
Trichlorofluoromethane	20.0	18.6		ug/L		93	17 - 181	
Vinyl chloride	20.0	17.9		ug/L		90	1 - 251	
Xylenes, Total	40.0	38.8		ug/L		97	78 - 119	
trans-1,2-Dichloroethene	20.0	18.9		ug/L		95	54 - 156	

Surrogate	LCS		
	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	95		79 - 119
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	95		71 - 121
Dibromofluoromethane (Surr)	96		77 - 129

Lab Sample ID: LCSD 680-484275/4

Matrix: Water

Analysis Batch: 484275

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD			Unit	D	%Rec	%Rec.	RPD	Limit
		Result	Qualifier	Limits						
1,1,1-Trichloroethane	20.0	20.4		ug/L		102	52 - 162		9	30
1,1-Dichloroethane	20.0	19.8		ug/L		99	59 - 155		5	30
1,1-Dichloroethene	20.0	20.3		ug/L		101	1 - 234		9	30
1,2-Dichloropropane	20.0	19.9		ug/L		99	1 - 210		2	30
1,4-Dichlorobenzene	20.0	20.3		ug/L		101	18 - 190		4	30
Bromodichloromethane	20.0	19.3		ug/L		96	35 - 155		2	30
Chloroform	20.0	20.0		ug/L		100	51 - 138		4	30
Chloromethane	20.0	17.7		ug/L		88	1 - 273		5	50
cis-1,2-Dichloroethene	20.0	20.2		ug/L		101	60 - 131		5	30
Dibromochloromethane	20.0	19.5		ug/L		97	53 - 149		1	30
Dichlorodifluoromethane	20.0	23.8		ug/L		119	70 - 130		12	30
Ethylbenzene	20.0	20.7		ug/L		104	37 - 162		7	30
Methylene Chloride	20.0	19.8		ug/L		99	1 - 221		4	30
Naphthalene	20.0	21.9		ug/L		110	58 - 143		1	30
Styrene	20.0	20.7		ug/L		104	50 - 150		3	30
Tetrachloroethene	20.0	21.7		ug/L		108	64 - 148		10	30
Toluene	20.0	20.5		ug/L		103	47 - 150		6	30
Trichloroethene	20.0	21.2		ug/L		106	71 - 157		8	30
Trichlorofluoromethane	20.0	20.8		ug/L		104	17 - 181		11	30
Vinyl chloride	20.0	20.1		ug/L		100	1 - 251		11	50
Xylenes, Total	40.0	40.7		ug/L		102	78 - 119		5	30
trans-1,2-Dichloroethene	20.0	20.8		ug/L		104	54 - 156		9	30

Surrogate	LCSD		
	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	101		79 - 119
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	98		71 - 121

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation
Project/Site: VA Public Supply Wells

TestAmerica Job ID: 680-139744-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-484275/4

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 484275

Surrogate	LCSD	LCSD	
	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surrogate)	100		77 - 129

QC Association Summary

Client: Unisys Corporation
Project/Site: VA Public Supply Wells

TestAmerica Job ID: 680-139744-1

GC/MS VOA

Analysis Batch: 484275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-139744-1	TB060817 Lot 041317	Total/NA	Water	624	
680-139744-2	M12Z6	Total/NA	Water	624	
MB 680-484275/7	Method Blank	Total/NA	Water	624	
LCS 680-484275/3	Lab Control Sample	Total/NA	Water	624	
LCSD 680-484275/4	Lab Control Sample Dup	Total/NA	Water	624	

Lab Chronicle

Client: Unisys Corporation
Project/Site: VA Public Supply Wells

TestAmerica Job ID: 680-139744-1

Client Sample ID: TB060817 Lot 041317

Lab Sample ID: 680-139744-1

Matrix: Water

Date Collected: 06/08/17 00:00

Date Received: 06/09/17 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484275	06/16/17 15:49	CMB	TAL SAV

Client Sample ID: M12Z6

Lab Sample ID: 680-139744-2

Matrix: Water

Date Collected: 06/08/17 10:07

Date Received: 06/09/17 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484275	06/16/17 19:42	CMB	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TestAmerica Savannah

ANALYSIS REQUESTED
TestAmerica

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

 TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
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Serial Number 69551

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THE LEADER IN ENVIRONMENTAL TESTING

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6/27/2017



Login Sample Receipt Checklist

Client: Unisys Corporation

Job Number: 680-139744-1

Login Number: 139744

List Source: TestAmerica Savannah

List Number: 1

Creator: Edwards, Jessica R

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	False	Refer to Job Narrative for details.
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Unisys Corporation
Project/Site: VA Public Supply Wells

TestAmerica Job ID: 680-139744-1

Laboratory: TestAmerica Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Puerto Rico	State Program	2	GA00006	12-31-17

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**GROUNDWATER ANALYTICAL SAMPLES
ORGANIC ANALYSIS – VOLATILES IN WATER
TestAmerica Savannah Job No. 680-139864
Samples Collected June 9 and 12, 2017**



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-139864-1

Client Project/Site: VA Public Supply Wells (Annual)

Revision: 1

For:

Unisys Corporation

Vega Alta Trust c/o Unisys Corporation

2476 Swedesford Road

Malvern, Pennsylvania 19355

Attn: Mr. Martin Howe

Authorized for release by:

7/21/2017 5:35:21 PM

Jerry Lanier, Project Manager I

(912)354-7858 e.3410

jerry.lanier@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Unisys Corporation
Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Job ID: 680-139864-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: Unisys Corporation
Project: VA Public Supply Wells (Annual)

Report Number: 680-139864-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 06/13/2017; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 3.3° C.

The final report was revised to edit the EB sample ID from EB060717 to EB060917 as it appears on the COC.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB060917 Lot 041317 (680-139864-1), M22Z4 (680-139864-2), M22Z6 (680-139864-3), M22Z8 (680-139864-4), EB069717 (680-139864-5), TB061217 Lot 041317 (680-139864-6) and M2Z7 (680-139864-7) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA Method 624. The samples were analyzed on 06/16/2017 and 06/19/2017.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with analytical batches 680-484275 and 680-484624.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Sample Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-139864-1	TB060917 Lot 041317	Water	06/09/17 00:00	06/13/17 09:36
680-139864-2	M22Z4	Water	06/09/17 09:32	06/13/17 09:36
680-139864-3	M22Z6	Water	06/09/17 10:01	06/13/17 09:36
680-139864-4	M22Z8	Water	06/09/17 10:46	06/13/17 09:36
680-139864-5	EB060917	Water	06/09/17 10:16	06/13/17 09:36
680-139864-6	TB061217 Lot 041317	Water	06/12/17 00:00	06/13/17 09:36
680-139864-7	M2Z7	Water	06/12/17 10:34	06/13/17 09:36

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TestAmerica Savannah

Method Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL SAV

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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Definitions/Glossary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Glossary

Abbreviation

These commonly used abbreviations may or may not be present in this report.

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Unisys Corporation
 Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Client Sample ID: TB060917 Lot 041317

Lab Sample ID: 680-139864-1

No Detections.

Client Sample ID: M22Z4

Lab Sample ID: 680-139864-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	1.0		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	1.0		1.0		ug/L	1	624		Total/NA
Trichloroethene	40		1.0		ug/L	1	624		Total/NA

Client Sample ID: M22Z6

Lab Sample ID: 680-139864-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.0		1.0		ug/L	1	624		Total/NA
1,1-Dichloroethene	4.0		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	5.0		1.0		ug/L	1	624		Total/NA
Trichloroethene	140		1.0		ug/L	1	624		Total/NA

Client Sample ID: M22Z8

Lab Sample ID: 680-139864-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.5		1.0		ug/L	1	624		Total/NA
1,1-Dichloroethene	4.1		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	5.1		1.0		ug/L	1	624		Total/NA
Trichloroethene	140		1.0		ug/L	1	624		Total/NA

Client Sample ID: EB060917

Lab Sample ID: 680-139864-5

No Detections.

Client Sample ID: TB061217 Lot 041317

Lab Sample ID: 680-139864-6

No Detections.

Client Sample ID: M2Z7

Lab Sample ID: 680-139864-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.5		1.0		ug/L	1	624		Total/NA
1,1-Dichloroethane	1.3		1.0		ug/L	1	624		Total/NA
1,1-Dichloroethene	16		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	2.2		1.0		ug/L	1	624		Total/NA
Trichloroethene	20		1.0		ug/L	1	624		Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Client Sample ID: TB060917 Lot 041317

Lab Sample ID: 680-139864-1

Date Collected: 06/09/17 00:00

Matrix: Water

Date Received: 06/13/17 09:36

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Bromodichloromethane	ND		1.0		ug/L			06/16/17 16:12	1	
Chloroform	ND		1.0		ug/L			06/16/17 16:12	1	
Chloromethane	ND		1.0		ug/L			06/16/17 16:12	1	
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 16:12	1	
Dibromochloromethane	ND		1.0		ug/L			06/16/17 16:12	1	
1,4-Dichlorobenzene	ND		1.0		ug/L			06/16/17 16:12	1	
Dichlorodifluoromethane	ND		1.0		ug/L			06/16/17 16:12	1	
1,1-Dichloroethane	ND		1.0		ug/L			06/16/17 16:12	1	
1,1-Dichloroethene	ND		1.0		ug/L			06/16/17 16:12	1	
1,2-Dichloropropane	ND		1.0		ug/L			06/16/17 16:12	1	
Ethylbenzene	ND		1.0		ug/L			06/16/17 16:12	1	
Methylene Chloride	ND		5.0		ug/L			06/16/17 16:12	1	
Naphthalene	ND		5.0		ug/L			06/16/17 16:12	1	
Styrene	ND		1.0		ug/L			06/16/17 16:12	1	
Tetrachloroethene	ND		1.0		ug/L			06/16/17 16:12	1	
Toluene	ND		1.0		ug/L			06/16/17 16:12	1	
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 16:12	1	
1,1,1-Trichloroethane	ND		1.0		ug/L			06/16/17 16:12	1	
Trichloroethene	ND		1.0		ug/L			06/16/17 16:12	1	
Trichlorofluoromethane	ND		1.0		ug/L			06/16/17 16:12	1	
Vinyl chloride	ND		1.0		ug/L			06/16/17 16:12	1	
Xylenes, Total	ND		2.0		ug/L			06/16/17 16:12	1	
Surrogate				%Recovery		Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103			79 - 119					06/16/17 16:12	1
1,2-Dichloroethane-d4 (Surr)	100			70 - 130					06/16/17 16:12	1
4-Bromofluorobenzene (Surr)	102			71 - 121					06/16/17 16:12	1
Dibromofluoromethane (Surr)	102			77 - 129					06/16/17 16:12	1

Client Sample ID: M22Z4

Lab Sample ID: 680-139864-2

Date Collected: 06/09/17 09:32

Matrix: Water

Date Received: 06/13/17 09:36

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		1.0		ug/L			06/16/17 20:06	1
Chloroform	ND		1.0		ug/L			06/16/17 20:06	1
Chloromethane	ND		1.0		ug/L			06/16/17 20:06	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 20:06	1
Dibromochloromethane	ND		1.0		ug/L			06/16/17 20:06	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/16/17 20:06	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/16/17 20:06	1
1,1-Dichloroethane	ND		1.0		ug/L			06/16/17 20:06	1
1,1-Dichloroethene	1.0		1.0		ug/L			06/16/17 20:06	1
1,2-Dichloropropane	ND		1.0		ug/L			06/16/17 20:06	1
Ethylbenzene	ND		1.0		ug/L			06/16/17 20:06	1
Methylene Chloride	ND		5.0		ug/L			06/16/17 20:06	1
Naphthalene	ND		5.0		ug/L			06/16/17 20:06	1
Styrene	ND		1.0		ug/L			06/16/17 20:06	1
Tetrachloroethene	1.0		1.0		ug/L			06/16/17 20:06	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Client Sample ID: M22Z4

Date Collected: 06/09/17 09:32

Date Received: 06/13/17 09:36

Lab Sample ID: 680-139864-2

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0		ug/L			06/16/17 20:06	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 20:06	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/16/17 20:06	1
Trichloroethene	40		1.0		ug/L			06/16/17 20:06	1
Trichlorofluoromethane	ND		1.0		ug/L			06/16/17 20:06	1
Vinyl chloride	ND		1.0		ug/L			06/16/17 20:06	1
Xylenes, Total	ND		2.0		ug/L			06/16/17 20:06	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)		103		79 - 119				06/16/17 20:06	1
1,2-Dichloroethane-d4 (Surr)		99		70 - 130				06/16/17 20:06	1
4-Bromofluorobenzene (Surr)		102		71 - 121				06/16/17 20:06	1
Dibromofluoromethane (Surr)		101		77 - 129				06/16/17 20:06	1

Client Sample ID: M22Z6

Date Collected: 06/09/17 10:01

Date Received: 06/13/17 09:36

Lab Sample ID: 680-139864-3

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		1.0		ug/L			06/16/17 21:38	1
Chloroform	ND		1.0		ug/L			06/16/17 21:38	1
Chloromethane	ND		1.0		ug/L			06/16/17 21:38	1
cis-1,2-Dichloroethene	1.0		1.0		ug/L			06/16/17 21:38	1
Dibromochloromethane	ND		1.0		ug/L			06/16/17 21:38	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/16/17 21:38	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/16/17 21:38	1
1,1-Dichloroethane	ND		1.0		ug/L			06/16/17 21:38	1
1,1-Dichloroethene	4.0		1.0		ug/L			06/16/17 21:38	1
1,2-Dichloropropane	ND		1.0		ug/L			06/16/17 21:38	1
Ethylbenzene	ND		1.0		ug/L			06/16/17 21:38	1
Methylene Chloride	ND		5.0		ug/L			06/16/17 21:38	1
Naphthalene	ND		5.0		ug/L			06/16/17 21:38	1
Styrene	ND		1.0		ug/L			06/16/17 21:38	1
Tetrachloroethene	5.0		1.0		ug/L			06/16/17 21:38	1
Toluene	ND		1.0		ug/L			06/16/17 21:38	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 21:38	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/16/17 21:38	1
Trichloroethene	140		1.0		ug/L			06/16/17 21:38	1
Trichlorofluoromethane	ND		1.0		ug/L			06/16/17 21:38	1
Vinyl chloride	ND		1.0		ug/L			06/16/17 21:38	1
Xylenes, Total	ND		2.0		ug/L			06/16/17 21:38	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)		103		79 - 119				06/16/17 21:38	1
1,2-Dichloroethane-d4 (Surr)		99		70 - 130				06/16/17 21:38	1
4-Bromofluorobenzene (Surr)		102		71 - 121				06/16/17 21:38	1
Dibromofluoromethane (Surr)		102		77 - 129				06/16/17 21:38	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Client Sample ID: M22Z8

Date Collected: 06/09/17 10:46

Date Received: 06/13/17 09:36

Lab Sample ID: 680-139864-4

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		1.0		ug/L			06/19/17 19:47	1
Chloroform	ND		1.0		ug/L			06/19/17 19:47	1
Chloromethane	ND		1.0		ug/L			06/19/17 19:47	1
cis-1,2-Dichloroethene	1.5		1.0		ug/L			06/19/17 19:47	1
Dibromochloromethane	ND		1.0		ug/L			06/19/17 19:47	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/19/17 19:47	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/19/17 19:47	1
1,1-Dichloroethane	ND		1.0		ug/L			06/19/17 19:47	1
1,1-Dichloroethene	4.1		1.0		ug/L			06/19/17 19:47	1
1,2-Dichloropropane	ND		1.0		ug/L			06/19/17 19:47	1
Ethylbenzene	ND		1.0		ug/L			06/19/17 19:47	1
Methylene Chloride	ND		5.0		ug/L			06/19/17 19:47	1
Naphthalene	ND		5.0		ug/L			06/19/17 19:47	1
Styrene	ND		1.0		ug/L			06/19/17 19:47	1
Tetrachloroethene	5.1		1.0		ug/L			06/19/17 19:47	1
Toluene	ND		1.0		ug/L			06/19/17 19:47	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/19/17 19:47	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/19/17 19:47	1
Trichloroethene	140		1.0		ug/L			06/19/17 19:47	1
Trichlorofluoromethane	ND		1.0		ug/L			06/19/17 19:47	1
Vinyl chloride	ND		1.0		ug/L			06/19/17 19:47	1
Xylenes, Total	ND		2.0		ug/L			06/19/17 19:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		79 - 119					06/19/17 19:47	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 130					06/19/17 19:47	1
4-Bromofluorobenzene (Surr)	101		71 - 121					06/19/17 19:47	1
Dibromofluoromethane (Surr)	100		77 - 129					06/19/17 19:47	1

Client Sample ID: EB060917

Date Collected: 06/09/17 10:16

Date Received: 06/13/17 09:36

Lab Sample ID: 680-139864-5

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		1.0		ug/L			06/19/17 16:16	1
Chloroform	ND		1.0		ug/L			06/19/17 16:16	1
Chloromethane	ND		1.0		ug/L			06/19/17 16:16	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/19/17 16:16	1
Dibromochloromethane	ND		1.0		ug/L			06/19/17 16:16	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/19/17 16:16	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/19/17 16:16	1
1,1-Dichloroethane	ND		1.0		ug/L			06/19/17 16:16	1
1,1-Dichloroethene	ND		1.0		ug/L			06/19/17 16:16	1
1,2-Dichloropropane	ND		1.0		ug/L			06/19/17 16:16	1
Ethylbenzene	ND		1.0		ug/L			06/19/17 16:16	1
Methylene Chloride	ND		5.0		ug/L			06/19/17 16:16	1
Naphthalene	ND		5.0		ug/L			06/19/17 16:16	1
Styrene	ND		1.0		ug/L			06/19/17 16:16	1
Tetrachloroethene	ND		1.0		ug/L			06/19/17 16:16	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Client Sample ID: EB060917

Date Collected: 06/09/17 10:16

Date Received: 06/13/17 09:36

Lab Sample ID: 680-139864-5

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0		ug/L			06/19/17 16:16	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/19/17 16:16	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/19/17 16:16	1
Trichloroethene	ND		1.0		ug/L			06/19/17 16:16	1
Trichlorofluoromethane	ND		1.0		ug/L			06/19/17 16:16	1
Vinyl chloride	ND		1.0		ug/L			06/19/17 16:16	1
Xylenes, Total	ND		2.0		ug/L			06/19/17 16:16	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102			79 - 119				06/19/17 16:16	1
1,2-Dichloroethane-d4 (Surr)	97			70 - 130				06/19/17 16:16	1
4-Bromofluorobenzene (Surr)	101			71 - 121				06/19/17 16:16	1
Dibromofluoromethane (Surr)	99			77 - 129				06/19/17 16:16	1

Client Sample ID: TB061217 Lot 041317

Lab Sample ID: 680-139864-6

Matrix: Water

Date Collected: 06/12/17 00:00

Date Received: 06/13/17 09:36

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		1.0		ug/L			06/19/17 14:42	1
Chloroform	ND		1.0		ug/L			06/19/17 14:42	1
Chloromethane	ND		1.0		ug/L			06/19/17 14:42	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/19/17 14:42	1
Dibromochloromethane	ND		1.0		ug/L			06/19/17 14:42	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/19/17 14:42	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/19/17 14:42	1
1,1-Dichloroethane	ND		1.0		ug/L			06/19/17 14:42	1
1,1-Dichloroethene	ND		1.0		ug/L			06/19/17 14:42	1
1,2-Dichloropropane	ND		1.0		ug/L			06/19/17 14:42	1
Ethylbenzene	ND		1.0		ug/L			06/19/17 14:42	1
Methylene Chloride	ND		5.0		ug/L			06/19/17 14:42	1
Naphthalene	ND		5.0		ug/L			06/19/17 14:42	1
Styrene	ND		1.0		ug/L			06/19/17 14:42	1
Tetrachloroethene	ND		1.0		ug/L			06/19/17 14:42	1
Toluene	ND		1.0		ug/L			06/19/17 14:42	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/19/17 14:42	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/19/17 14:42	1
Trichloroethene	ND		1.0		ug/L			06/19/17 14:42	1
Trichlorofluoromethane	ND		1.0		ug/L			06/19/17 14:42	1
Vinyl chloride	ND		1.0		ug/L			06/19/17 14:42	1
Xylenes, Total	ND		2.0		ug/L			06/19/17 14:42	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101			79 - 119				06/19/17 14:42	1
1,2-Dichloroethane-d4 (Surr)	100			70 - 130				06/19/17 14:42	1
4-Bromofluorobenzene (Surr)	102			71 - 121				06/19/17 14:42	1
Dibromofluoromethane (Surr)	100			77 - 129				06/19/17 14:42	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Client Sample ID: M2Z7

Date Collected: 06/12/17 10:34

Date Received: 06/13/17 09:36

Lab Sample ID: 680-139864-7

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		1.0		ug/L		06/19/17 20:10		1
Chloroform	ND		1.0		ug/L		06/19/17 20:10		1
Chloromethane	ND		1.0		ug/L		06/19/17 20:10		1
cis-1,2-Dichloroethene	1.5		1.0		ug/L		06/19/17 20:10		1
Dibromochloromethane	ND		1.0		ug/L		06/19/17 20:10		1
1,4-Dichlorobenzene	ND		1.0		ug/L		06/19/17 20:10		1
Dichlorodifluoromethane	ND		1.0		ug/L		06/19/17 20:10		1
1,1-Dichloroethane	1.3		1.0		ug/L		06/19/17 20:10		1
1,1-Dichloroethene	16		1.0		ug/L		06/19/17 20:10		1
1,2-Dichloropropane	ND		1.0		ug/L		06/19/17 20:10		1
Ethylbenzene	ND		1.0		ug/L		06/19/17 20:10		1
Methylene Chloride	ND		5.0		ug/L		06/19/17 20:10		1
Naphthalene	ND		5.0		ug/L		06/19/17 20:10		1
Styrene	ND		1.0		ug/L		06/19/17 20:10		1
Tetrachloroethene	2.2		1.0		ug/L		06/19/17 20:10		1
Toluene	ND		1.0		ug/L		06/19/17 20:10		1
trans-1,2-Dichloroethene	ND		1.0		ug/L		06/19/17 20:10		1
1,1,1-Trichloroethane	ND		1.0		ug/L		06/19/17 20:10		1
Trichloroethene	20		1.0		ug/L		06/19/17 20:10		1
Trichlorofluoromethane	ND		1.0		ug/L		06/19/17 20:10		1
Vinyl chloride	ND		1.0		ug/L		06/19/17 20:10		1
Xylenes, Total	ND		2.0		ug/L		06/19/17 20:10		1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		79 - 119				06/19/17 20:10		1
1,2-Dichloroethane-d4 (Surr)	99		70 - 130				06/19/17 20:10		1
4-Bromofluorobenzene (Surr)	102		71 - 121				06/19/17 20:10		1
Dibromofluoromethane (Surr)	99		77 - 129				06/19/17 20:10		1

Surrogate Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TOL (79-119)	12DCE (70-130)	BFB (71-121)	DBFM (77-129)						
680-139864-1	TB060917 Lot 041317	103	100	102	102						
680-139864-2	M22Z4	103	99	102	101						
680-139864-3	M22Z6	103	99	102	102						
680-139864-4	M22Z8	102	99	101	100						
680-139864-5	EB060917	102	97	101	99						
680-139864-6	TB061217 Lot 041317	101	100	102	100						
680-139864-7	M2Z7	102	99	102	99						
LCS 680-484275/3	Lab Control Sample	95	97	95	96						
LCS 680-484624/3	Lab Control Sample	102	98	99	100						
LCSD 680-484275/4	Lab Control Sample Dup	101	98	98	100						
LCSD 680-484624/4	Lab Control Sample Dup	99	97	96	97						
MB 680-484275/7	Method Blank	104	111	102	108						
MB 680-484624/7	Method Blank	102	99	102	99						

Surrogate Legend

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-484275/7

Matrix: Water

Analysis Batch: 484275

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		1.0		ug/L			06/16/17 15:02	1
Chloroform	ND		1.0		ug/L			06/16/17 15:02	1
Chloromethane	ND		1.0		ug/L			06/16/17 15:02	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 15:02	1
Dibromochloromethane	ND		1.0		ug/L			06/16/17 15:02	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/16/17 15:02	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/16/17 15:02	1
1,1-Dichloroethane	ND		1.0		ug/L			06/16/17 15:02	1
1,1-Dichloroethene	ND		1.0		ug/L			06/16/17 15:02	1
1,2-Dichloropropane	ND		1.0		ug/L			06/16/17 15:02	1
Ethylbenzene	ND		1.0		ug/L			06/16/17 15:02	1
Methylene Chloride	ND		5.0		ug/L			06/16/17 15:02	1
Naphthalene	ND		5.0		ug/L			06/16/17 15:02	1
Styrene	ND		1.0		ug/L			06/16/17 15:02	1
Tetrachloroethene	ND		1.0		ug/L			06/16/17 15:02	1
Toluene	ND		1.0		ug/L			06/16/17 15:02	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/16/17 15:02	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/16/17 15:02	1
Trichloroethene	ND		1.0		ug/L			06/16/17 15:02	1
Trichlorofluoromethane	ND		1.0		ug/L			06/16/17 15:02	1
Vinyl chloride	ND		1.0		ug/L			06/16/17 15:02	1
Xylenes, Total	ND		2.0		ug/L			06/16/17 15:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		79 - 119		06/16/17 15:02	1
1,2-Dichloroethane-d4 (Surr)	111		70 - 130		06/16/17 15:02	1
4-Bromofluorobenzene (Surr)	102		71 - 121		06/16/17 15:02	1
Dibromofluoromethane (Surr)	108		77 - 129		06/16/17 15:02	1

Lab Sample ID: LCS 680-484275/3

Matrix: Water

Analysis Batch: 484275

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Bromodichloromethane	20.0	18.9		ug/L		95	35 - 155	
Chloroform	20.0	19.1		ug/L		96	51 - 138	
Chloromethane	20.0	16.7		ug/L		84	1 - 273	
cis-1,2-Dichloroethene	20.0	19.3		ug/L		96	60 - 131	
Dibromochloromethane	20.0	19.3		ug/L		97	53 - 149	
1,4-Dichlorobenzene	20.0	19.4		ug/L		97	18 - 190	
Dichlorodifluoromethane	20.0	21.0		ug/L		105	70 - 130	
1,1-Dichloroethane	20.0	18.9		ug/L		94	59 - 155	
1,1-Dichloroethene	20.0	18.5		ug/L		92	1 - 234	
1,2-Dichloropropane	20.0	19.4		ug/L		97	1 - 210	
Ethylbenzene	20.0	19.3		ug/L		96	37 - 162	
Methylene Chloride	20.0	19.1		ug/L		95	1 - 221	
Naphthalene	20.0	22.1		ug/L		110	58 - 143	
Styrene	20.0	20.1		ug/L		100	50 - 150	

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-484275/3

Matrix: Water

Analysis Batch: 484275

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits	
	Added	Result	Qualifier						
Tetrachloroethene	20.0	19.6		ug/L		98	64 - 148		
Toluene	20.0	19.2		ug/L		96	47 - 150		
trans-1,2-Dichloroethene	20.0	18.9		ug/L		95	54 - 156		
1,1,1-Trichloroethane	20.0	18.7		ug/L		93	52 - 162		
Trichloroethene	20.0	19.6		ug/L		98	71 - 157		
Trichlorofluoromethane	20.0	18.6		ug/L		93	17 - 181		
Vinyl chloride	20.0	17.9		ug/L		90	1 - 251		
Xylenes, Total	40.0	38.8		ug/L		97	78 - 119		
Surrogate		LCS	LCS						
		%Recovery	Qualifier						
Toluene-d8 (Surr)	95								
1,2-Dichloroethane-d4 (Surr)	97								
4-Bromofluorobenzene (Surr)	95								
Dibromofluoromethane (Surr)	96								

Lab Sample ID: LCSD 680-484275/4

Matrix: Water

Analysis Batch: 484275

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Added	Result	Qualifier						
Bromodichloromethane	20.0	19.3		ug/L		96	35 - 155	2	30
Chloroform	20.0	20.0		ug/L		100	51 - 138	4	30
Chloromethane	20.0	17.7		ug/L		88	1 - 273	5	50
cis-1,2-Dichloroethene	20.0	20.2		ug/L		101	60 - 131	5	30
Dibromochloromethane	20.0	19.5		ug/L		97	53 - 149	1	30
1,4-Dichlorobenzene	20.0	20.3		ug/L		101	18 - 190	4	30
Dichlorodifluoromethane	20.0	23.8		ug/L		119	70 - 130	12	30
1,1-Dichloroethane	20.0	19.8		ug/L		99	59 - 155	5	30
1,1-Dichloroethene	20.0	20.3		ug/L		101	1 - 234	9	30
1,2-Dichloropropane	20.0	19.9		ug/L		99	1 - 210	2	30
Ethylbenzene	20.0	20.7		ug/L		104	37 - 162	7	30
Methylene Chloride	20.0	19.8		ug/L		99	1 - 221	4	30
Naphthalene	20.0	21.9		ug/L		110	58 - 143	1	30
Styrene	20.0	20.7		ug/L		104	50 - 150	3	30
Tetrachloroethene	20.0	21.7		ug/L		108	64 - 148	10	30
Toluene	20.0	20.5		ug/L		103	47 - 150	6	30
trans-1,2-Dichloroethene	20.0	20.8		ug/L		104	54 - 156	9	30
1,1,1-Trichloroethane	20.0	20.4		ug/L		102	52 - 162	9	30
Trichloroethene	20.0	21.2		ug/L		106	71 - 157	8	30
Trichlorofluoromethane	20.0	20.8		ug/L		104	17 - 181	11	30
Vinyl chloride	20.0	20.1		ug/L		100	1 - 251	11	50
Xylenes, Total	40.0	40.7		ug/L		102	78 - 119	5	30
Surrogate		LCSD	LCSD						
		%Recovery	Qualifier						
Toluene-d8 (Surr)	101								
1,2-Dichloroethane-d4 (Surr)	98								
4-Bromofluorobenzene (Surr)	98								

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-484275/4

Matrix: Water

Analysis Batch: 484275

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	100		77 - 129

Lab Sample ID: MB 680-484624/7

Matrix: Water

Analysis Batch: 484624

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		1.0		ug/L			06/19/17 14:19	1
Chloroform	ND		1.0		ug/L			06/19/17 14:19	1
Chloromethane	ND		1.0		ug/L			06/19/17 14:19	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/19/17 14:19	1
Dibromochloromethane	ND		1.0		ug/L			06/19/17 14:19	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/19/17 14:19	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/19/17 14:19	1
1,1-Dichloroethane	ND		1.0		ug/L			06/19/17 14:19	1
1,1-Dichloroethene	ND		1.0		ug/L			06/19/17 14:19	1
1,2-Dichloropropane	ND		1.0		ug/L			06/19/17 14:19	1
Ethylbenzene	ND		1.0		ug/L			06/19/17 14:19	1
Methylene Chloride	ND		5.0		ug/L			06/19/17 14:19	1
Naphthalene	ND		5.0		ug/L			06/19/17 14:19	1
Styrene	ND		1.0		ug/L			06/19/17 14:19	1
Tetrachloroethene	ND		1.0		ug/L			06/19/17 14:19	1
Toluene	ND		1.0		ug/L			06/19/17 14:19	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/19/17 14:19	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/19/17 14:19	1
Trichloroethene	ND		1.0		ug/L			06/19/17 14:19	1
Trichlorofluoromethane	ND		1.0		ug/L			06/19/17 14:19	1
Vinyl chloride	ND		1.0		ug/L			06/19/17 14:19	1
Xylenes, Total	ND		2.0		ug/L			06/19/17 14:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		79 - 119		06/19/17 14:19	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 130		06/19/17 14:19	1
4-Bromofluorobenzene (Surr)	102		71 - 121		06/19/17 14:19	1
Dibromofluoromethane (Surr)	99		77 - 129		06/19/17 14:19	1

Lab Sample ID: LCS 680-484624/3

Matrix: Water

Analysis Batch: 484624

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS			%Rec.	Limits
		Result	Qualifier	Unit		
Bromodichloromethane	20.0	19.1		ug/L	96	35 - 155
Chloroform	20.0	19.7		ug/L	99	51 - 138
Chloromethane	20.0	16.4		ug/L	82	1 - 273
cis-1,2-Dichloroethene	20.0	19.8		ug/L	99	60 - 131
Dibromochloromethane	20.0	19.1		ug/L	95	53 - 149
1,4-Dichlorobenzene	20.0	20.1		ug/L	100	18 - 190
Dichlorodifluoromethane	20.0	24.9		ug/L	125	70 - 130

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-484624/3

Matrix: Water

Analysis Batch: 484624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits	5
	Added	Result	Qualifier				Limits		
1,1-Dichloroethane	20.0	19.7		ug/L		99	59 - 155		6
1,1-Dichloroethene	20.0	20.2		ug/L		101	1 - 234		7
1,2-Dichloropropane	20.0	19.8		ug/L		99	1 - 210		8
Ethylbenzene	20.0	20.3		ug/L		102	37 - 162		9
Methylene Chloride	20.0	19.4		ug/L		97	1 - 221		10
Naphthalene	20.0	20.5		ug/L		103	58 - 143		11
Styrene	20.0	20.3		ug/L		102	50 - 150		12
Tetrachloroethene	20.0	21.4		ug/L		107	64 - 148		13
Toluene	20.0	20.1		ug/L		100	47 - 150		
trans-1,2-Dichloroethene	20.0	20.3		ug/L		102	54 - 156		
1,1,1-Trichloroethane	20.0	20.5		ug/L		102	52 - 162		
Trichloroethene	20.0	21.0		ug/L		105	71 - 157		
Trichlorofluoromethane	20.0	20.4		ug/L		102	17 - 181		
Vinyl chloride	20.0	20.4		ug/L		102	1 - 251		
Xylenes, Total	40.0	40.0		ug/L		100	78 - 119		

LCS

LCS

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	102		79 - 119
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	99		71 - 121
Dibromofluoromethane (Surr)	100		77 - 129

Lab Sample ID: LCSD 680-484624/4

Matrix: Water

Analysis Batch: 484624

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	RPD Limit
	Added	Result	Qualifier				Limits		
Bromodichloromethane	20.0	18.7		ug/L		94	35 - 155	2	30
Chloroform	20.0	19.2		ug/L		96	51 - 138	3	30
Chloromethane	20.0	15.9		ug/L		79	1 - 273	3	50
cis-1,2-Dichloroethene	20.0	19.4		ug/L		97	60 - 131	2	30
Dibromochloromethane	20.0	18.6		ug/L		93	53 - 149	3	30
1,4-Dichlorobenzene	20.0	19.5		ug/L		98	18 - 190	3	30
Dichlorodifluoromethane	20.0	23.5		ug/L		118	70 - 130	6	30
1,1-Dichloroethane	20.0	18.9		ug/L		95	59 - 155	4	30
1,1-Dichloroethene	20.0	18.8		ug/L		94	1 - 234	8	30
1,2-Dichloropropane	20.0	19.5		ug/L		97	1 - 210	2	30
Ethylbenzene	20.0	19.3		ug/L		96	37 - 162	5	30
Methylene Chloride	20.0	19.3		ug/L		97	1 - 221	0	30
Naphthalene	20.0	20.7		ug/L		103	58 - 143	1	30
Styrene	20.0	19.5		ug/L		98	50 - 150	4	30
Tetrachloroethene	20.0	19.9		ug/L		100	64 - 148	7	30
Toluene	20.0	19.3		ug/L		96	47 - 150	4	30
trans-1,2-Dichloroethene	20.0	19.3		ug/L		96	54 - 156	5	30
1,1,1-Trichloroethane	20.0	19.2		ug/L		96	52 - 162	6	30
Trichloroethene	20.0	19.9		ug/L		100	71 - 157	5	30
Trichlorofluoromethane	20.0	19.0		ug/L		95	17 - 181	7	30
Vinyl chloride	20.0	19.1		ug/L		95	1 - 251	7	50

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-484624/4

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 484624

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	%Rec. Limits	RPD	RPD Limit
Xylenes, Total	40.0	38.2		ug/L		96	78 - 119	5	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	99		79 - 119
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	96		71 - 121
Dibromofluoromethane (Surr)	97		77 - 129

QC Association Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

GC/MS VOA

Analysis Batch: 484275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-139864-1	TB060917 Lot 041317	Total/NA	Water	624	5
680-139864-2	M22Z4	Total/NA	Water	624	5
680-139864-3	M22Z6	Total/NA	Water	624	5
MB 680-484275/7	Method Blank	Total/NA	Water	624	6
LCS 680-484275/3	Lab Control Sample	Total/NA	Water	624	7
LCSD 680-484275/4	Lab Control Sample Dup	Total/NA	Water	624	7

Analysis Batch: 484624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-139864-4	M22Z8	Total/NA	Water	624	9
680-139864-5	EB060917	Total/NA	Water	624	9
680-139864-6	TB061217 Lot 041317	Total/NA	Water	624	10
680-139864-7	M2Z7	Total/NA	Water	624	11
MB 680-484624/7	Method Blank	Total/NA	Water	624	11
LCS 680-484624/3	Lab Control Sample	Total/NA	Water	624	12
LCSD 680-484624/4	Lab Control Sample Dup	Total/NA	Water	624	12

Lab Chronicle

Client: Unisys Corporation
 Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Client Sample ID: TB060917 Lot 041317

Lab Sample ID: 680-139864-1

Matrix: Water

Date Collected: 06/09/17 00:00
 Date Received: 06/13/17 09:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484275	06/16/17 16:12	CMB	TAL SAV

Instrument ID: CMSC

Client Sample ID: M22Z4

Lab Sample ID: 680-139864-2

Matrix: Water

Date Collected: 06/09/17 09:32
 Date Received: 06/13/17 09:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484275	06/16/17 20:06	CMB	TAL SAV

Instrument ID: CMSC

Client Sample ID: M22Z6

Lab Sample ID: 680-139864-3

Matrix: Water

Date Collected: 06/09/17 10:01
 Date Received: 06/13/17 09:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484275	06/16/17 21:38	CMB	TAL SAV

Instrument ID: CMSC

Client Sample ID: M22Z8

Lab Sample ID: 680-139864-4

Matrix: Water

Date Collected: 06/09/17 10:46
 Date Received: 06/13/17 09:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484624	06/19/17 19:47	WAS	TAL SAV

Instrument ID: CMSC

Client Sample ID: EB060917

Lab Sample ID: 680-139864-5

Matrix: Water

Date Collected: 06/09/17 10:16
 Date Received: 06/13/17 09:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484624	06/19/17 16:16	WAS	TAL SAV

Instrument ID: CMSC

Client Sample ID: TB061217 Lot 041317

Lab Sample ID: 680-139864-6

Matrix: Water

Date Collected: 06/12/17 00:00
 Date Received: 06/13/17 09:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484624	06/19/17 14:42	WAS	TAL SAV

Instrument ID: CMSC

TestAmerica Savannah

Lab Chronicle

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Client Sample ID: M2Z7

Date Collected: 06/12/17 10:34

Date Received: 06/13/17 09:36

Lab Sample ID: 680-139864-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484624	06/19/17 20:10	WAS	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Phone:
Fax:

Alternate Laboratory Name/Location

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7/21/2017

TAL8240-680 (1008)
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Login Sample Receipt Checklist

Client: Unisys Corporation

Job Number: 680-139864-1

Login Number: 139864

List Source: TestAmerica Savannah

List Number: 1

Creator: Edwards, Jessica R

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139864-1

Laboratory: TestAmerica Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Puerto Rico	State Program	2	GA00006	12-31-17

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**GROUNDWATER ANALYTICAL SAMPLES
ORGANIC ANALYSIS – VOLATILES IN WATER
TestAmerica Savannah Job No. 680-139995
Samples Collected June 13, 2017**



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-139995-1

Client Project/Site: VA Public Supply Wells (Annual)

For:

Unisys Corporation

Vega Alta Trust c/o Unisys Corporation

2476 Swedesford Road

Malvern, Pennsylvania 19355

Attn: Mr. Martin Howe

Kathryn Smith

Authorized for release by:

6/26/2017 3:09:36 PM

Kathryn Smith, Manager of Project Management

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Designee for

Jerry Lanier, Project Manager I

(912)354-7858 e.3410

jerry.lanier@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Unisys Corporation
Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139995-1

Job ID: 680-139995-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: Unisys Corporation

Project: VA Public Supply Wells (Annual)

Report Number: 680-139995-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 06/15/2017; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 2.4° C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB061317 Lot 041317 (680-139995-1), M15Z6 (680-139995-2), M15Z10 (680-139995-3) and MW23 (680-139995-4) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA Method 624. The samples were analyzed on 06/19/2017 and 06/23/2017.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with analytical batch 680-484624.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Sample Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139995-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-139995-1	TB061317 Lot 041317	Water	06/13/17 00:00	06/15/17 09:31
680-139995-2	M15Z6	Water	06/13/17 10:48	06/15/17 09:31
680-139995-3	M15Z10	Water	06/13/17 12:05	06/15/17 09:31
680-139995-4	MW23	Water	06/13/17 12:53	06/15/17 09:31

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TestAmerica Savannah

Method Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139995-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL SAV

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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Definitions/Glossary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139995-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Unisys Corporation
Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139995-1

Client Sample ID: TB061317 Lot 041317

Lab Sample ID: 680-139995-1

No Detections.

Client Sample ID: M15Z6

Lab Sample ID: 680-139995-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	2.2		1.0		ug/L	1	624		Total/NA
cis-1,2-Dichloroethene	11		1.0		ug/L	1	624		Total/NA

Client Sample ID: M15Z10

Lab Sample ID: 680-139995-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	16		5.0		ug/L	1	624		Total/NA
Styrene	1.2		1.0		ug/L	1	624		Total/NA

Client Sample ID: MW23

Lab Sample ID: 680-139995-4

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139995-1

Client Sample ID: TB061317 Lot 041317

Lab Sample ID: 680-139995-1

Matrix: Water

Date Collected: 06/13/17 00:00

Date Received: 06/15/17 09:31

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/19/17 15:06	1
1,1-Dichloroethane	ND		1.0		ug/L			06/19/17 15:06	1
1,1-Dichloroethene	ND		1.0		ug/L			06/19/17 15:06	1
1,2-Dichloropropane	ND		1.0		ug/L			06/19/17 15:06	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/19/17 15:06	1
Bromodichloromethane	ND		1.0		ug/L			06/19/17 15:06	1
Chloroform	ND		1.0		ug/L			06/19/17 15:06	1
Chloromethane	ND		1.0		ug/L			06/19/17 15:06	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/19/17 15:06	1
Dibromochloromethane	ND		1.0		ug/L			06/19/17 15:06	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/19/17 15:06	1
Ethylbenzene	ND		1.0		ug/L			06/19/17 15:06	1
Methylene Chloride	ND		5.0		ug/L			06/19/17 15:06	1
Naphthalene	ND		5.0		ug/L			06/19/17 15:06	1
Styrene	ND		1.0		ug/L			06/19/17 15:06	1
Tetrachloroethene	ND		1.0		ug/L			06/19/17 15:06	1
Toluene	ND		1.0		ug/L			06/19/17 15:06	1
Trichloroethene	ND		1.0		ug/L			06/19/17 15:06	1
Trichlorofluoromethane	ND		1.0		ug/L			06/19/17 15:06	1
Vinyl chloride	ND		1.0		ug/L			06/19/17 15:06	1
Xylenes, Total	ND		2.0		ug/L			06/19/17 15:06	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/19/17 15:06	1
Surrogate				Prepared		Analyzed		Dil Fac	
Toluene-d8 (Surr)	102			79 - 119				06/19/17 15:06	
1,2-Dichloroethane-d4 (Surr)	99			70 - 130				06/19/17 15:06	
4-Bromofluorobenzene (Surr)	101			71 - 121				06/19/17 15:06	
Dibromofluoromethane (Surr)	100			77 - 129				06/19/17 15:06	

Client Sample ID: M15Z6

Lab Sample ID: 680-139995-2

Matrix: Water

Date Collected: 06/13/17 10:48

Date Received: 06/15/17 09:31

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/19/17 20:33	1
1,1-Dichloroethane	ND		1.0		ug/L			06/19/17 20:33	1
1,1-Dichloroethene	2.2		1.0		ug/L			06/19/17 20:33	1
1,2-Dichloropropane	ND		1.0		ug/L			06/19/17 20:33	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/19/17 20:33	1
Bromodichloromethane	ND		1.0		ug/L			06/19/17 20:33	1
Chloroform	ND		1.0		ug/L			06/19/17 20:33	1
Chloromethane	ND		1.0		ug/L			06/19/17 20:33	1
cis-1,2-Dichloroethene	11		1.0		ug/L			06/19/17 20:33	1
Dibromochloromethane	ND		1.0		ug/L			06/19/17 20:33	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/19/17 20:33	1
Ethylbenzene	ND		1.0		ug/L			06/19/17 20:33	1
Methylene Chloride	ND		5.0		ug/L			06/19/17 20:33	1
Naphthalene	ND		5.0		ug/L			06/19/17 20:33	1
Styrene	ND		1.0		ug/L			06/19/17 20:33	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139995-1

Client Sample ID: M15Z6

Date Collected: 06/13/17 10:48

Date Received: 06/15/17 09:31

Lab Sample ID: 680-139995-2

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		1.0		ug/L			06/19/17 20:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		79 - 119					06/19/17 20:33	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 130					06/19/17 20:33	1
4-Bromofluorobenzene (Surr)	102		71 - 121					06/19/17 20:33	1
Dibromofluoromethane (Surr)	101		77 - 129					06/19/17 20:33	1

Client Sample ID: M15Z10

Date Collected: 06/13/17 12:05

Date Received: 06/15/17 09:31

Lab Sample ID: 680-139995-3

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/23/17 17:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		79 - 119					06/23/17 17:41	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 130					06/23/17 17:41	1
4-Bromofluorobenzene (Surr)	96		71 - 121					06/23/17 17:41	1
Dibromofluoromethane (Surr)	97		77 - 129					06/23/17 17:41	1

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139995-1

Client Sample ID: MW23

Date Collected: 06/13/17 12:53

Date Received: 06/15/17 09:31

Lab Sample ID: 680-139995-4

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L		06/23/17 18:04		1
1,1-Dichloroethane	ND		1.0		ug/L		06/23/17 18:04		1
1,1-Dichloroethene	ND		1.0		ug/L		06/23/17 18:04		1
1,2-Dichloropropane	ND		1.0		ug/L		06/23/17 18:04		1
1,4-Dichlorobenzene	ND		1.0		ug/L		06/23/17 18:04		1
Bromodichloromethane	ND		1.0		ug/L		06/23/17 18:04		1
Chloroform	ND		1.0		ug/L		06/23/17 18:04		1
Chloromethane	ND		1.0		ug/L		06/23/17 18:04		1
cis-1,2-Dichloroethene	ND		1.0		ug/L		06/23/17 18:04		1
Dibromochloromethane	ND		1.0		ug/L		06/23/17 18:04		1
Dichlorodifluoromethane	ND		1.0		ug/L		06/23/17 18:04		1
Ethylbenzene	ND		1.0		ug/L		06/23/17 18:04		1
Methylene Chloride	ND		5.0		ug/L		06/23/17 18:04		1
Naphthalene	ND		5.0		ug/L		06/23/17 18:04		1
Styrene	ND		1.0		ug/L		06/23/17 18:04		1
Tetrachloroethene	ND		1.0		ug/L		06/23/17 18:04		1
Toluene	ND		1.0		ug/L		06/23/17 18:04		1
Trichloroethene	ND		1.0		ug/L		06/23/17 18:04		1
Trichlorofluoromethane	ND		1.0		ug/L		06/23/17 18:04		1
Vinyl chloride	ND		1.0		ug/L		06/23/17 18:04		1
Xylenes, Total	ND		2.0		ug/L		06/23/17 18:04		1
trans-1,2-Dichloroethene	ND		1.0		ug/L		06/23/17 18:04		1
Surrogate				Limits			Prepared		
Toluene-d8 (Surr)	99			79 - 119			06/23/17 18:04		
1,2-Dichloroethane-d4 (Surr)	96			70 - 130			06/23/17 18:04		
4-Bromofluorobenzene (Surr)	97			71 - 121			06/23/17 18:04		
Dibromofluoromethane (Surr)	97			77 - 129			06/23/17 18:04		

Surrogate Summary

Client: Unisys Corporation

TestAmerica Job ID: 680-139995-1

Project/Site: VA Public Supply Wells (Annual)

Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TOL (79-119)	12DCE (70-130)	BFB (71-121)	DBFM (77-129)
680-139995-1	TB061317 Lot 041317	102	99	101	100
680-139995-2	M15Z6	101	101	102	101
680-139995-2 MS	M15Z6	103	98	96	102
680-139995-2 MSD	M15Z6	103	96	95	101
680-139995-3	M15Z10	99	96	96	97
680-139995-4	MW23	99	96	97	97
LCS 680-484624/3	Lab Control Sample	102	98	99	100
LCS 680-485281/3	Lab Control Sample	101	99	94	101
LCSD 680-484624/4	Lab Control Sample Dup	99	97	96	97
LCSD 680-485281/4	Lab Control Sample Dup	104	102	97	104
MB 680-484624/7	Method Blank	102	99	102	99
MB 680-485281/7	Method Blank	100	97	100	99

Surrogate Legend

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139995-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-484624/7

Matrix: Water

Analysis Batch: 484624

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
1,1,1-Trichloroethane	ND				1.0		ug/L			06/19/17 14:19	1
1,1-Dichloroethane	ND				1.0		ug/L			06/19/17 14:19	1
1,1-Dichloroethene	ND				1.0		ug/L			06/19/17 14:19	1
1,2-Dichloropropane	ND				1.0		ug/L			06/19/17 14:19	1
1,4-Dichlorobenzene	ND				1.0		ug/L			06/19/17 14:19	1
Bromodichloromethane	ND				1.0		ug/L			06/19/17 14:19	1
Chloroform	ND				1.0		ug/L			06/19/17 14:19	1
Chloromethane	ND				1.0		ug/L			06/19/17 14:19	1
cis-1,2-Dichloroethene	ND				1.0		ug/L			06/19/17 14:19	1
Dibromochloromethane	ND				1.0		ug/L			06/19/17 14:19	1
Dichlorodifluoromethane	ND				1.0		ug/L			06/19/17 14:19	1
Ethylbenzene	ND				1.0		ug/L			06/19/17 14:19	1
Methylene Chloride	ND				5.0		ug/L			06/19/17 14:19	1
Naphthalene	ND				5.0		ug/L			06/19/17 14:19	1
Styrene	ND				1.0		ug/L			06/19/17 14:19	1
Tetrachloroethene	ND				1.0		ug/L			06/19/17 14:19	1
Toluene	ND				1.0		ug/L			06/19/17 14:19	1
Trichloroethene	ND				1.0		ug/L			06/19/17 14:19	1
Trichlorofluoromethane	ND				1.0		ug/L			06/19/17 14:19	1
Vinyl chloride	ND				1.0		ug/L			06/19/17 14:19	1
Xylenes, Total	ND				2.0		ug/L			06/19/17 14:19	1
trans-1,2-Dichloroethene	ND				1.0		ug/L			06/19/17 14:19	1

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Toluene-d8 (Surr)	102		102		79 - 119		06/19/17 14:19	1
1,2-Dichloroethane-d4 (Surr)	99		99		70 - 130		06/19/17 14:19	1
4-Bromofluorobenzene (Surr)	102		102		71 - 121		06/19/17 14:19	1
Dibromofluoromethane (Surr)	99		99		77 - 129		06/19/17 14:19	1

Lab Sample ID: LCS 680-484624/3

Matrix: Water

Analysis Batch: 484624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LC%	LCS	Result	Qualifier	Unit	D	%Rec	Limits	%Rec.
		Added	Added							
1,1,1-Trichloroethane		20.0		20.5		ug/L		102	52 - 162	
1,1-Dichloroethane		20.0		19.7		ug/L		99	59 - 155	
1,1-Dichloroethene		20.0		20.2		ug/L		101	1 - 234	
1,2-Dichloropropane		20.0		19.8		ug/L		99	1 - 210	
1,4-Dichlorobenzene		20.0		20.1		ug/L		100	18 - 190	
Bromodichloromethane		20.0		19.1		ug/L		96	35 - 155	
Chloroform		20.0		19.7		ug/L		99	51 - 138	
Chloromethane		20.0		16.4		ug/L		82	1 - 273	
cis-1,2-Dichloroethene		20.0		19.8		ug/L		99	60 - 131	
Dibromochloromethane		20.0		19.1		ug/L		95	53 - 149	
Dichlorodifluoromethane		20.0		24.9		ug/L		125	70 - 130	
Ethylbenzene		20.0		20.3		ug/L		102	37 - 162	
Methylene Chloride		20.0		19.4		ug/L		97	1 - 221	
Naphthalene		20.0		20.5		ug/L		103	58 - 143	

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

TestAmerica Job ID: 680-139995-1

Project/Site: VA Public Supply Wells (Annual)

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-484624/3

Matrix: Water

Analysis Batch: 484624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS			Unit	D	%Rec	Limits
		Result	Qualifier	LCS				
Styrene	20.0	20.3		ug/L		102	50 - 150	
Tetrachloroethene	20.0	21.4		ug/L		107	64 - 148	
Toluene	20.0	20.1		ug/L		100	47 - 150	
Trichloroethene	20.0	21.0		ug/L		105	71 - 157	
Trichlorofluoromethane	20.0	20.4		ug/L		102	17 - 181	
Vinyl chloride	20.0	20.4		ug/L		102	1 - 251	
Xylenes, Total	40.0	40.0		ug/L		100	78 - 119	
trans-1,2-Dichloroethene	20.0	20.3		ug/L		102	54 - 156	

Surrogate	LCS		
	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	102		79 - 119
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	99		71 - 121
Dibromofluoromethane (Surr)	100		77 - 129

Lab Sample ID: LCSD 680-484624/4

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analysis Batch: 484624

Analyte	Spike Added	LCSD			Unit	D	%Rec	Limits	RPD	Limit
		Result	Qualifier	LCSD						
1,1,1-Trichloroethane	20.0	19.2		ug/L		96	52 - 162	6	30	
1,1-Dichloroethane	20.0	18.9		ug/L		95	59 - 155	4	30	
1,1-Dichloroethene	20.0	18.8		ug/L		94	1 - 234	8	30	
1,2-Dichloropropane	20.0	19.5		ug/L		97	1 - 210	2	30	
1,4-Dichlorobenzene	20.0	19.5		ug/L		98	18 - 190	3	30	
Bromodichloromethane	20.0	18.7		ug/L		94	35 - 155	2	30	
Chloroform	20.0	19.2		ug/L		96	51 - 138	3	30	
Chloromethane	20.0	15.9		ug/L		79	1 - 273	3	50	
cis-1,2-Dichloroethene	20.0	19.4		ug/L		97	60 - 131	2	30	
Dibromochloromethane	20.0	18.6		ug/L		93	53 - 149	3	30	
Dichlorodifluoromethane	20.0	23.5		ug/L		118	70 - 130	6	30	
Ethylbenzene	20.0	19.3		ug/L		96	37 - 162	5	30	
Methylene Chloride	20.0	19.3		ug/L		97	1 - 221	0	30	
Naphthalene	20.0	20.7		ug/L		103	58 - 143	1	30	
Styrene	20.0	19.5		ug/L		98	50 - 150	4	30	
Tetrachloroethene	20.0	19.9		ug/L		100	64 - 148	7	30	
Toluene	20.0	19.3		ug/L		96	47 - 150	4	30	
Trichloroethene	20.0	19.9		ug/L		100	71 - 157	5	30	
Trichlorofluoromethane	20.0	19.0		ug/L		95	17 - 181	7	30	
Vinyl chloride	20.0	19.1		ug/L		95	1 - 251	7	50	
Xylenes, Total	40.0	38.2		ug/L		96	78 - 119	5	30	
trans-1,2-Dichloroethene	20.0	19.3		ug/L		96	54 - 156	5	30	

Surrogate	LCSD		
	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	99		79 - 119
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	96		71 - 121

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139995-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-484624/4

Matrix: Water

Analysis Batch: 484624

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	97		77 - 129

Lab Sample ID: MB 680-485281/7

Matrix: Water

Analysis Batch: 485281

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/23/17 12:42	1
1,1-Dichloroethane	ND		1.0		ug/L			06/23/17 12:42	1
1,1-Dichloroethene	ND		1.0		ug/L			06/23/17 12:42	1
1,2-Dichloropropane	ND		1.0		ug/L			06/23/17 12:42	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/23/17 12:42	1
Bromodichloromethane	ND		1.0		ug/L			06/23/17 12:42	1
Chloroform	ND		1.0		ug/L			06/23/17 12:42	1
Chloromethane	ND		1.0		ug/L			06/23/17 12:42	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/23/17 12:42	1
Dibromochloromethane	ND		1.0		ug/L			06/23/17 12:42	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/23/17 12:42	1
Ethylbenzene	ND		1.0		ug/L			06/23/17 12:42	1
Methylene Chloride	ND		5.0		ug/L			06/23/17 12:42	1
Naphthalene	ND		5.0		ug/L			06/23/17 12:42	1
Styrene	ND		1.0		ug/L			06/23/17 12:42	1
Tetrachloroethene	ND		1.0		ug/L			06/23/17 12:42	1
Toluene	ND		1.0		ug/L			06/23/17 12:42	1
Trichloroethene	ND		1.0		ug/L			06/23/17 12:42	1
Trichlorofluoromethane	ND		1.0		ug/L			06/23/17 12:42	1
Vinyl chloride	ND		1.0		ug/L			06/23/17 12:42	1
Xylenes, Total	ND		2.0		ug/L			06/23/17 12:42	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/23/17 12:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		79 - 119			1
1,2-Dichloroethane-d4 (Surr)	97		70 - 130			1
4-Bromofluorobenzene (Surr)	100		71 - 121			1
Dibromofluoromethane (Surr)	99		77 - 129			1

Lab Sample ID: LCS 680-485281/3

Matrix: Water

Analysis Batch: 485281

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
1,1,1-Trichloroethane	20.0	20.0		ug/L		100	52 - 162
1,1-Dichloroethane	20.0	19.6		ug/L		98	59 - 155
1,1-Dichloroethene	20.0	19.6		ug/L		98	1 - 234
1,2-Dichloropropane	20.0	20.1		ug/L		100	1 - 210
1,4-Dichlorobenzene	20.0	19.2		ug/L		96	18 - 190
Bromodichloromethane	20.0	19.0		ug/L		95	35 - 155
Chloroform	20.0	19.9		ug/L		99	51 - 138

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

TestAmerica Job ID: 680-139995-1

Project/Site: VA Public Supply Wells (Annual)

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-485281/3

Matrix: Water

Analysis Batch: 485281

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits	
	Added	Result	Qualifier						
Chloromethane	20.0	14.9		ug/L		75	1 - 273		
cis-1,2-Dichloroethene	20.0	19.9		ug/L		99	60 - 131		
Dibromochloromethane	20.0	18.8		ug/L		94	53 - 149		
Dichlorodifluoromethane	20.0	24.0		ug/L		120	70 - 130		
Ethylbenzene	20.0	20.0		ug/L		100	37 - 162		
Methylene Chloride	20.0	19.3		ug/L		96	1 - 221		
Naphthalene	20.0	18.8		ug/L		94	58 - 143		
Styrene	20.0	19.8		ug/L		99	50 - 150		
Tetrachloroethene	20.0	21.6		ug/L		108	64 - 148		
Toluene	20.0	20.1		ug/L		101	47 - 150		
Trichloroethene	20.0	20.7		ug/L		104	71 - 157		
Trichlorofluoromethane	20.0	19.9		ug/L		100	17 - 181		
Vinyl chloride	20.0	19.0		ug/L		95	1 - 251		
Xylenes, Total	40.0	39.3		ug/L		98	78 - 119		
trans-1,2-Dichloroethene	20.0	20.1		ug/L		101	54 - 156		

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	101		79 - 119
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	94		71 - 121
Dibromofluoromethane (Surr)	101		77 - 129

Lab Sample ID: LCSD 680-485281/4

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analysis Batch: 485281

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Added	Result	Qualifier						
1,1,1-Trichloroethane	20.0	21.1		ug/L		106	52 - 162	6	30
1,1-Dichloroethane	20.0	20.5		ug/L		102	59 - 155	5	30
1,1-Dichloroethene	20.0	20.7		ug/L		103	1 - 234	5	30
1,2-Dichloropropane	20.0	20.8		ug/L		104	1 - 210	4	30
1,4-Dichlorobenzene	20.0	19.9		ug/L		99	18 - 190	4	30
Bromodichloromethane	20.0	19.8		ug/L		99	35 - 155	4	30
Chloroform	20.0	20.6		ug/L		103	51 - 138	4	30
Chloromethane	20.0	15.0		ug/L		75	1 - 273	0	50
cis-1,2-Dichloroethene	20.0	20.7		ug/L		104	60 - 131	4	30
Dibromochloromethane	20.0	19.7		ug/L		98	53 - 149	5	30
Dichlorodifluoromethane	20.0	25.7		ug/L		129	70 - 130	7	30
Ethylbenzene	20.0	20.6		ug/L		103	37 - 162	3	30
Methylene Chloride	20.0	20.2		ug/L		101	1 - 221	5	30
Naphthalene	20.0	19.1		ug/L		96	58 - 143	2	30
Styrene	20.0	20.8		ug/L		104	50 - 150	5	30
Tetrachloroethene	20.0	21.7		ug/L		109	64 - 148	0	30
Toluene	20.0	20.9		ug/L		105	47 - 150	4	30
Trichloroethene	20.0	21.5		ug/L		107	71 - 157	3	30
Trichlorofluoromethane	20.0	21.2		ug/L		106	17 - 181	6	30
Vinyl chloride	20.0	20.5		ug/L		102	1 - 251	7	50
Xylenes, Total	40.0	40.3		ug/L		101	78 - 119	3	30

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139995-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-485281/4

Matrix: Water

Analysis Batch: 485281

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte		Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	RPD	Limit
		Added	Result	Qualifier							
trans-1,2-Dichloroethene		20.0	21.2		ug/L		106	54 - 156	5	30	
Surrogate											
Toluene-d8 (Surr)	104		79 - 119								
1,2-Dichloroethane-d4 (Surr)	102		70 - 130								
4-Bromofluorobenzene (Surr)	97		71 - 121								
Dibromofluoromethane (Surr)	104		77 - 129								

Lab Sample ID: 680-139995-2 MS

Matrix: Water

Analysis Batch: 485281

Client Sample ID: M15Z6

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
1,1,1-Trichloroethane	ND		20.0	20.6		ug/L		103	52 - 162		
1,1-Dichloroethane	ND		20.0	20.1		ug/L		100	59 - 155		
1,1-Dichloroethene	2.2		20.0	23.4		ug/L		106	1 - 234		
1,2-Dichloropropane	ND		20.0	19.8		ug/L		99	1 - 210		
1,4-Dichlorobenzene	ND		20.0	19.2		ug/L		96	18 - 190		
Bromodichloromethane	ND		20.0	18.7		ug/L		93	35 - 155		
Chloroform	ND		20.0	19.9		ug/L		100	51 - 138		
Chloromethane	ND		20.0	14.9		ug/L		75	1 - 273		
cis-1,2-Dichloroethene	11		20.0	31.0		ug/L		98	60 - 131		
Dibromochloromethane	ND		20.0	17.6		ug/L		88	53 - 149		
Dichlorodifluoromethane	ND		20.0	25.3		ug/L		126	70 - 130		
Ethylbenzene	ND		20.0	19.4		ug/L		97	37 - 162		
Methylene Chloride	ND		20.0	19.6		ug/L		98	1 - 221		
Naphthalene	ND		20.0	17.7		ug/L		88	58 - 143		
Styrene	ND		20.0	19.0		ug/L		95	50 - 150		
Tetrachloroethene	ND		20.0	21.3		ug/L		107	64 - 148		
Toluene	ND		20.0	20.6		ug/L		103	47 - 150		
Trichloroethene	ND		20.0	21.0		ug/L		105	71 - 157		
Trichlorofluoromethane	ND		20.0	21.0		ug/L		105	17 - 181		
Vinyl chloride	ND		20.0	21.1		ug/L		105	1 - 251		
Xylenes, Total	ND		40.0	37.8		ug/L		95	78 - 119		
trans-1,2-Dichloroethene	ND		20.0	21.2		ug/L		106	54 - 156		
Surrogate											
Toluene-d8 (Surr)	103		79 - 119								
1,2-Dichloroethane-d4 (Surr)	98		70 - 130								
4-Bromofluorobenzene (Surr)	96		71 - 121								
Dibromofluoromethane (Surr)	102		77 - 129								

Lab Sample ID: 680-139995-2 MSD

Matrix: Water

Analysis Batch: 485281

Client Sample ID: M15Z6

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
1,1,1-Trichloroethane	ND		20.0	20.4		ug/L		102	52 - 162	1	30

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139995-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-139995-2 MSD

Matrix: Water

Analysis Batch: 485281

Client Sample ID: M15Z6

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec.		RPD	RPD
	Result	Qualifier	Added	Result	Qualifier			%Rec.	Limits		
1,1-Dichloroethane	ND		20.0	19.8		ug/L	99	59 - 155	2	30	
1,1-Dichloroethene	2.2		20.0	22.5		ug/L	102	1 - 234	4	30	
1,2-Dichloropropane	ND		20.0	19.7		ug/L	98	1 - 210	1	30	
1,4-Dichlorobenzene	ND		20.0	19.1		ug/L	96	18 - 190	1	30	
Bromodichloromethane	ND		20.0	18.6		ug/L	93	35 - 155	1	30	
Chloroform	ND		20.0	19.8		ug/L	99	51 - 138	1	30	
Chloromethane	ND		20.0	14.6		ug/L	73	1 - 273	3	50	
cis-1,2-Dichloroethene	11		20.0	28.7		ug/L	86	60 - 131	8	30	
Dibromochloromethane	ND		20.0	17.8		ug/L	89	53 - 149	1	30	
Dichlorodifluoromethane	ND		20.0	25.3		ug/L	127	70 - 130	0	30	
Ethylbenzene	ND		20.0	19.6		ug/L	98	37 - 162	1	30	
Methylene Chloride	ND		20.0	19.6		ug/L	98	1 - 221	0	30	
Naphthalene	ND		20.0	20.3		ug/L	102	58 - 143	14	30	
Styrene	ND		20.0	19.2		ug/L	96	50 - 150	1	30	
Tetrachloroethene	ND		20.0	21.4		ug/L	107	64 - 148	0	30	
Toluene	ND		20.0	20.1		ug/L	101	47 - 150	2	30	
Trichloroethene	ND		20.0	20.8		ug/L	104	71 - 157	1	30	
Trichlorofluoromethane	ND		20.0	21.4		ug/L	107	17 - 181	2	30	
Vinyl chloride	ND		20.0	21.1		ug/L	106	1 - 251	0	50	
Xylenes, Total	ND		40.0	37.8		ug/L	95	78 - 119	0	30	
trans-1,2-Dichloroethene	ND		20.0	20.8		ug/L	104	54 - 156	1	30	

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	103		79 - 119
1,2-Dichloroethane-d4 (Surr)	96		70 - 130
4-Bromofluorobenzene (Surr)	95		71 - 121
Dibromofluoromethane (Surr)	101		77 - 129

QC Association Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139995-1

GC/MS VOA

Analysis Batch: 484624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-139995-1	TB061317 Lot 041317	Total/NA	Water	624	
680-139995-2	M15Z6	Total/NA	Water	624	
MB 680-484624/7	Method Blank	Total/NA	Water	624	
LCS 680-484624/3	Lab Control Sample	Total/NA	Water	624	
LCSD 680-484624/4	Lab Control Sample Dup	Total/NA	Water	624	

Analysis Batch: 485281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-139995-3	M15Z10	Total/NA	Water	624	
680-139995-4	MW23	Total/NA	Water	624	
MB 680-485281/7	Method Blank	Total/NA	Water	624	
LCS 680-485281/3	Lab Control Sample	Total/NA	Water	624	
LCSD 680-485281/4	Lab Control Sample Dup	Total/NA	Water	624	
680-139995-2 MS	M15Z6	Total/NA	Water	624	
680-139995-2 MSD	M15Z6	Total/NA	Water	624	

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Lab Chronicle

Client: Unisys Corporation
Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139995-1

Client Sample ID: TB061317 Lot 041317

Lab Sample ID: 680-139995-1

Matrix: Water

Date Collected: 06/13/17 00:00
Date Received: 06/15/17 09:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484624	06/19/17 15:06	WAS	TAL SAV

Client Sample ID: M15Z6

Lab Sample ID: 680-139995-2

Matrix: Water

Date Collected: 06/13/17 10:48
Date Received: 06/15/17 09:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	484624	06/19/17 20:33	WAS	TAL SAV

Client Sample ID: M15Z10

Lab Sample ID: 680-139995-3

Matrix: Water

Date Collected: 06/13/17 12:05
Date Received: 06/15/17 09:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	485281	06/23/17 17:41	WAS	TAL SAV

Client Sample ID: MW23

Lab Sample ID: 680-139995-4

Matrix: Water

Date Collected: 06/13/17 12:53
Date Received: 06/15/17 09:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	485281	06/23/17 18:04	WAS	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TestAmerica Savannah

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Alternate Laboratory Name/Location
Phone:
Fax:

Serial Number 69989

PROJECT REFERENCE YA_PublSupplyNurs		PROJECT NO. 68010D783	PROJECT LOCATION (STATE) PR	MATRIX TYPE CONTRACT NO.	REQUIRED ANALYSIS		PAGE / OF /
TAI (LAB) PROJECT MANAGER Jerry Larin	P.O. NUMBER MM 787-614-2254	CLIENT PHONE 610-648-2208	CLIENT FAX 651-635-3614	AIR NONAQUEOUS LIQUID (OIL, SOLVENT, ...)			STANDARD REPORT DELIVERY DATE DUE X
CLIENT (SITE) Miguel Cedeno	CLIENT E-MAIL 			SOLID OR SEMISOLID AQUEOUS (WATER)			EXPEDITED REPORT DELIVERY (SURCHARGE) DATE DUE
CLIENT NAME Martin House	COMPANY CONTRACTING THIS WORK (if applicable) 2476 Sundland Road Malvern, PA 19355			PRESERVATIVE		NUMBER OF COOLERS SUBMITTED PER SHIPMENT:	/
SAMPLE		SAMPLE IDENTIFICATION		NUMBER OF CONTAINERS SUBMITTED		REMARKS	
DATE	TIME			2		<i>samples collected</i>	
—	—	TB061317 lot 041317		6 ✓	3	<i>recovered to</i>	
6-13-17	1048	M1524		6 ✓	3	<i>VegaAtta</i>	
6-13-17	1048	M1526 (MS)		6 ✓	3	<i>allowal</i>	
6-13-17	1048	M1526 (MSD)		6 ✓	3	<i>Sampling</i>	
6-13-17	1205	M1521D		6 ✓	3	<i>2017.</i>	
		TB061317-wsp		6 ✓	3		
		6-13-17 1253 HW23		6 ✓	3		
				17	Total 17		
RELINQUISHED BY: (SIGNATURE) WT Patalo	DATE 6-14-17	TIME 1305	RELINQUISHED BY: (SIGNATURE)	DATE	TIME		
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME		
RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE 6-15-17	TIME 931	CUSTODY INTACT YES <input checked="" type="radio"/> NO <input type="radio"/>	CUSTODY SEAL NO. ○ ○	SAVANNAH LOG NO.	LABORATORY REMARKS 1.9/2.4	

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Login Sample Receipt Checklist

Client: Unisys Corporation

Job Number: 680-139995-1

Login Number: 139995

List Source: TestAmerica Savannah

List Number: 1

Creator: Flanagan, Naomi V

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-139995-1

Laboratory: TestAmerica Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Puerto Rico	State Program	2	GA00006	12-31-17

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**GROUNDWATER ANALYTICAL SAMPLES
ORGANIC ANALYSIS – VOLATILES IN WATER
TestAmerica Savannah Job No. 680-140029
Samples Collected June 15, 2017**



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-140029-1

Client Project/Site: VA Public Supply Wells (Annual)

For:

Unisys Corporation

Vega Alta Trust c/o Unisys Corporation

2476 Swedesford Road

Malvern, Pennsylvania 19355

Attn: Mr. Martin Howe

Kathryn Smith

Authorized for release by:

6/27/2017 12:55:47 PM

Kathryn Smith, Manager of Project Management

(912)354-7858

kathy.smith@testamericainc.com

Designee for

Jerry Lanier, Project Manager I

(912)354-7858 e.3410

jerry.lanier@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Unisys Corporation
Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140029-1

Job ID: 680-140029-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: Unisys Corporation
Project: VA Public Supply Wells (Annual)

Report Number: 680-140029-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 06/16/2017; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 2.2° C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB061517 Lot 041317 (680-140029-1), M4Z4 (680-140029-2) and M4Z8 (680-140029-3) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA Method 624. The samples were analyzed on 06/23/2017.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Sample Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140029-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-140029-1	TB061517 Lot 041317	Water	06/15/17 00:00	06/16/17 09:31
680-140029-2	M4Z4	Water	06/15/17 10:21	06/16/17 09:31
680-140029-3	M4Z8	Water	06/15/17 11:08	06/16/17 09:31

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TestAmerica Savannah

Method Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140029-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL SAV

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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Definitions/Glossary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140029-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140029-1

Client Sample ID: TB061517 Lot 041317

Lab Sample ID: 680-140029-1

No Detections.

Client Sample ID: M4Z4

Lab Sample ID: 680-140029-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	4.8		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	2.4		1.0		ug/L	1	624		Total/NA
Trichloroethene	13		1.0		ug/L	1	624		Total/NA

Client Sample ID: M4Z8

Lab Sample ID: 680-140029-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.5		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	1.8		1.0		ug/L	1	624		Total/NA
Trichloroethene	26		1.0		ug/L	1	624		Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140029-1

Client Sample ID: TB061517 Lot 041317

Lab Sample ID: 680-140029-1

Matrix: Water

Date Collected: 06/15/17 00:00

Date Received: 06/16/17 09:31

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/23/17 15:00	1
1,1-Dichloroethane	ND		1.0		ug/L			06/23/17 15:00	1
1,1-Dichloroethene	ND		1.0		ug/L			06/23/17 15:00	1
1,2-Dichloropropane	ND		1.0		ug/L			06/23/17 15:00	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/23/17 15:00	1
Bromodichloromethane	ND		1.0		ug/L			06/23/17 15:00	1
Chloroform	ND		1.0		ug/L			06/23/17 15:00	1
Chloromethane	ND		1.0		ug/L			06/23/17 15:00	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/23/17 15:00	1
Dibromochloromethane	ND		1.0		ug/L			06/23/17 15:00	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/23/17 15:00	1
Ethylbenzene	ND		1.0		ug/L			06/23/17 15:00	1
Methylene Chloride	ND		5.0		ug/L			06/23/17 15:00	1
Naphthalene	ND		5.0		ug/L			06/23/17 15:00	1
Styrene	ND		1.0		ug/L			06/23/17 15:00	1
Tetrachloroethene	ND		1.0		ug/L			06/23/17 15:00	1
Toluene	ND		1.0		ug/L			06/23/17 15:00	1
Trichloroethene	ND		1.0		ug/L			06/23/17 15:00	1
Trichlorofluoromethane	ND		1.0		ug/L			06/23/17 15:00	1
Vinyl chloride	ND		1.0		ug/L			06/23/17 15:00	1
Xylenes, Total	ND		2.0		ug/L			06/23/17 15:00	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/23/17 15:00	1
Surrogate				Prepared		Analyzed		Dil Fac	
Toluene-d8 (Surr)	99	Qualifier	Limits					06/23/17 15:00	1
1,2-Dichloroethane-d4 (Surr)	97		79 - 119					06/23/17 15:00	1
4-Bromofluorobenzene (Surr)	98		70 - 130					06/23/17 15:00	1
Dibromofluoromethane (Surr)	97		71 - 121					06/23/17 15:00	1
			77 - 129					06/23/17 15:00	1

Client Sample ID: M4Z4

Lab Sample ID: 680-140029-2

Matrix: Water

Date Collected: 06/15/17 10:21

Date Received: 06/16/17 09:31

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/23/17 18:27	1
1,1-Dichloroethane	ND		1.0		ug/L			06/23/17 18:27	1
1,1-Dichloroethene	ND		1.0		ug/L			06/23/17 18:27	1
1,2-Dichloropropane	ND		1.0		ug/L			06/23/17 18:27	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/23/17 18:27	1
Bromodichloromethane	ND		1.0		ug/L			06/23/17 18:27	1
Chloroform	4.8		1.0		ug/L			06/23/17 18:27	1
Chloromethane	ND		1.0		ug/L			06/23/17 18:27	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/23/17 18:27	1
Dibromochloromethane	ND		1.0		ug/L			06/23/17 18:27	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/23/17 18:27	1
Ethylbenzene	ND		1.0		ug/L			06/23/17 18:27	1
Methylene Chloride	ND		5.0		ug/L			06/23/17 18:27	1
Naphthalene	ND		5.0		ug/L			06/23/17 18:27	1
Styrene	ND		1.0		ug/L			06/23/17 18:27	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140029-1

Client Sample ID: M4Z4

Date Collected: 06/15/17 10:21

Date Received: 06/16/17 09:31

Lab Sample ID: 680-140029-2

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	2.4		1.0		ug/L			06/23/17 18:27	1
Toluene	ND		1.0		ug/L			06/23/17 18:27	1
Trichloroethene	13		1.0		ug/L			06/23/17 18:27	1
Trichlorofluoromethane	ND		1.0		ug/L			06/23/17 18:27	1
Vinyl chloride	ND		1.0		ug/L			06/23/17 18:27	1
Xylenes, Total	ND		2.0		ug/L			06/23/17 18:27	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/23/17 18:27	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99			79 - 119				06/23/17 18:27	1
1,2-Dichloroethane-d4 (Surr)	96			70 - 130				06/23/17 18:27	1
4-Bromofluorobenzene (Surr)	97			71 - 121				06/23/17 18:27	1
Dibromofluoromethane (Surr)	97			77 - 129				06/23/17 18:27	1

Client Sample ID: M4Z8

Date Collected: 06/15/17 11:08

Date Received: 06/16/17 09:31

Lab Sample ID: 680-140029-3

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/23/17 18:50	1
1,1-Dichloroethane	ND		1.0		ug/L			06/23/17 18:50	1
1,1-Dichloroethene	ND		1.0		ug/L			06/23/17 18:50	1
1,2-Dichloropropane	ND		1.0		ug/L			06/23/17 18:50	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/23/17 18:50	1
Bromodichloromethane	ND		1.0		ug/L			06/23/17 18:50	1
Chloroform	ND		1.0		ug/L			06/23/17 18:50	1
Chloromethane	ND		1.0		ug/L			06/23/17 18:50	1
cis-1,2-Dichloroethene	1.5		1.0		ug/L			06/23/17 18:50	1
Dibromochloromethane	ND		1.0		ug/L			06/23/17 18:50	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/23/17 18:50	1
Ethylbenzene	ND		1.0		ug/L			06/23/17 18:50	1
Methylene Chloride	ND		5.0		ug/L			06/23/17 18:50	1
Naphthalene	ND		5.0		ug/L			06/23/17 18:50	1
Styrene	ND		1.0		ug/L			06/23/17 18:50	1
Tetrachloroethene	1.8		1.0		ug/L			06/23/17 18:50	1
Toluene	ND		1.0		ug/L			06/23/17 18:50	1
Trichloroethene	26		1.0		ug/L			06/23/17 18:50	1
Trichlorofluoromethane	ND		1.0		ug/L			06/23/17 18:50	1
Vinyl chloride	ND		1.0		ug/L			06/23/17 18:50	1
Xylenes, Total	ND		2.0		ug/L			06/23/17 18:50	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/23/17 18:50	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98			79 - 119				06/23/17 18:50	1
1,2-Dichloroethane-d4 (Surr)	95			70 - 130				06/23/17 18:50	1
4-Bromofluorobenzene (Surr)	97			71 - 121				06/23/17 18:50	1
Dibromofluoromethane (Surr)	96			77 - 129				06/23/17 18:50	1

TestAmerica Savannah

Surrogate Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140029-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TOL (79-119)	12DCE (70-130)	BFB (71-121)	DBFM (77-129)						
680-140029-1	TB061517 Lot 041317	99	97	98	97						
680-140029-2	M4Z4	99	96	97	97						
680-140029-3	M4Z8	98	95	97	96						
LCS 680-485281/3	Lab Control Sample	101	99	94	101						
LCSD 680-485281/4	Lab Control Sample Dup	104	102	97	104						
MB 680-485281/7	Method Blank	100	97	100	99						

Surrogate Legend

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140029-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-485281/7

Matrix: Water

Analysis Batch: 485281

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
1,1,1-Trichloroethane	ND				1.0		ug/L			06/23/17 12:42	1
1,1-Dichloroethane	ND				1.0		ug/L			06/23/17 12:42	1
1,1-Dichloroethene	ND				1.0		ug/L			06/23/17 12:42	1
1,2-Dichloropropane	ND				1.0		ug/L			06/23/17 12:42	1
1,4-Dichlorobenzene	ND				1.0		ug/L			06/23/17 12:42	1
Bromodichloromethane	ND				1.0		ug/L			06/23/17 12:42	1
Chloroform	ND				1.0		ug/L			06/23/17 12:42	1
Chloromethane	ND				1.0		ug/L			06/23/17 12:42	1
cis-1,2-Dichloroethene	ND				1.0		ug/L			06/23/17 12:42	1
Dibromochloromethane	ND				1.0		ug/L			06/23/17 12:42	1
Dichlorodifluoromethane	ND				1.0		ug/L			06/23/17 12:42	1
Ethylbenzene	ND				1.0		ug/L			06/23/17 12:42	1
Methylene Chloride	ND				5.0		ug/L			06/23/17 12:42	1
Naphthalene	ND				5.0		ug/L			06/23/17 12:42	1
Styrene	ND				1.0		ug/L			06/23/17 12:42	1
Tetrachloroethene	ND				1.0		ug/L			06/23/17 12:42	1
Toluene	ND				1.0		ug/L			06/23/17 12:42	1
Trichloroethene	ND				1.0		ug/L			06/23/17 12:42	1
Trichlorofluoromethane	ND				1.0		ug/L			06/23/17 12:42	1
Vinyl chloride	ND				1.0		ug/L			06/23/17 12:42	1
Xylenes, Total	ND				2.0		ug/L			06/23/17 12:42	1
trans-1,2-Dichloroethene	ND				1.0		ug/L			06/23/17 12:42	1

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Toluene-d8 (Surr)	100		100		79 - 119			1
1,2-Dichloroethane-d4 (Surr)	97		97		70 - 130			1
4-Bromofluorobenzene (Surr)	100		100		71 - 121			1
Dibromofluoromethane (Surr)	99		99		77 - 129			1

Lab Sample ID: LCS 680-485281/3

Matrix: Water

Analysis Batch: 485281

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCN	LCS	Result	Qualifier	Unit	D	%Rec	Limits	%Rec.
		Added	Result							
1,1,1-Trichloroethane		20.0	20.0			ug/L		100	52 - 162	
1,1-Dichloroethane		20.0	19.6			ug/L		98	59 - 155	
1,1-Dichloroethene		20.0	19.6			ug/L		98	1 - 234	
1,2-Dichloropropane		20.0	20.1			ug/L		100	1 - 210	
1,4-Dichlorobenzene		20.0	19.2			ug/L		96	18 - 190	
Bromodichloromethane		20.0	19.0			ug/L		95	35 - 155	
Chloroform		20.0	19.9			ug/L		99	51 - 138	
Chloromethane		20.0	14.9			ug/L		75	1 - 273	
cis-1,2-Dichloroethene		20.0	19.9			ug/L		99	60 - 131	
Dibromochloromethane		20.0	18.8			ug/L		94	53 - 149	
Dichlorodifluoromethane		20.0	24.0			ug/L		120	70 - 130	
Ethylbenzene		20.0	20.0			ug/L		100	37 - 162	
Methylene Chloride		20.0	19.3			ug/L		96	1 - 221	
Naphthalene		20.0	18.8			ug/L		94	58 - 143	

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

TestAmerica Job ID: 680-140029-1

Project/Site: VA Public Supply Wells (Annual)

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-485281/3

Matrix: Water

Analysis Batch: 485281

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS			Unit	D	%Rec	%Rec.
		Result	Qualifier	Limits				
Styrene	20.0	19.8		ug/L		99	50 - 150	
Tetrachloroethene	20.0	21.6		ug/L		108	64 - 148	
Toluene	20.0	20.1		ug/L		101	47 - 150	
Trichloroethene	20.0	20.7		ug/L		104	71 - 157	
Trichlorofluoromethane	20.0	19.9		ug/L		100	17 - 181	
Vinyl chloride	20.0	19.0		ug/L		95	1 - 251	
Xylenes, Total	40.0	39.3		ug/L		98	78 - 119	
trans-1,2-Dichloroethene	20.0	20.1		ug/L		101	54 - 156	

LCS LCS

Surrogate	%Recovery	LCS		Limits
		Qualifier	Limits	
Toluene-d8 (Surr)	101		79 - 119	
1,2-Dichloroethane-d4 (Surr)	99		70 - 130	
4-Bromofluorobenzene (Surr)	94		71 - 121	
Dibromofluoromethane (Surr)	101		77 - 129	

Lab Sample ID: LCSD 680-485281/4

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analysis Batch: 485281

Analyte	Spike Added	LCSD			Unit	D	%Rec	%Rec.	RPD	Limit
		Result	Qualifier	Limits						
1,1,1-Trichloroethane	20.0	21.1		ug/L		106	52 - 162		6	30
1,1-Dichloroethane	20.0	20.5		ug/L		102	59 - 155		5	30
1,1-Dichloroethene	20.0	20.7		ug/L		103	1 - 234		5	30
1,2-Dichloropropane	20.0	20.8		ug/L		104	1 - 210		4	30
1,4-Dichlorobenzene	20.0	19.9		ug/L		99	18 - 190		4	30
Bromodichloromethane	20.0	19.8		ug/L		99	35 - 155		4	30
Chloroform	20.0	20.6		ug/L		103	51 - 138		4	30
Chloromethane	20.0	15.0		ug/L		75	1 - 273		0	50
cis-1,2-Dichloroethene	20.0	20.7		ug/L		104	60 - 131		4	30
Dibromochloromethane	20.0	19.7		ug/L		98	53 - 149		5	30
Dichlorodifluoromethane	20.0	25.7		ug/L		129	70 - 130		7	30
Ethylbenzene	20.0	20.6		ug/L		103	37 - 162		3	30
Methylene Chloride	20.0	20.2		ug/L		101	1 - 221		5	30
Naphthalene	20.0	19.1		ug/L		96	58 - 143		2	30
Styrene	20.0	20.8		ug/L		104	50 - 150		5	30
Tetrachloroethene	20.0	21.7		ug/L		109	64 - 148		0	30
Toluene	20.0	20.9		ug/L		105	47 - 150		4	30
Trichloroethene	20.0	21.5		ug/L		107	71 - 157		3	30
Trichlorofluoromethane	20.0	21.2		ug/L		106	17 - 181		6	30
Vinyl chloride	20.0	20.5		ug/L		102	1 - 251		7	50
Xylenes, Total	40.0	40.3		ug/L		101	78 - 119		3	30
trans-1,2-Dichloroethene	20.0	21.2		ug/L		106	54 - 156		5	30

LCSD LCSD

Surrogate	%Recovery	LCSD		Limits
		Qualifier	Limits	
Toluene-d8 (Surr)	104		79 - 119	
1,2-Dichloroethane-d4 (Surr)	102		70 - 130	
4-Bromofluorobenzene (Surr)	97		71 - 121	

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140029-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-485281/4

Matrix: Water

Analysis Batch: 485281

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surrogate)	104		77 - 129

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TestAmerica Savannah

QC Association Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140029-1

GC/MS VOA

Analysis Batch: 485281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-140029-1	TB061517 Lot 041317	Total/NA	Water	624	
680-140029-2	M4Z4	Total/NA	Water	624	
680-140029-3	M4Z8	Total/NA	Water	624	
MB 680-485281/7	Method Blank	Total/NA	Water	624	
LCS 680-485281/3	Lab Control Sample	Total/NA	Water	624	
LCSD 680-485281/4	Lab Control Sample Dup	Total/NA	Water	624	

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Lab Chronicle

Client: Unisys Corporation
Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140029-1

Client Sample ID: TB061517 Lot 041317

Lab Sample ID: 680-140029-1

Matrix: Water

Date Collected: 06/15/17 00:00
Date Received: 06/16/17 09:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	485281	06/23/17 15:00	WAS	TAL SAV

Client Sample ID: M4Z4

Lab Sample ID: 680-140029-2

Matrix: Water

Date Collected: 06/15/17 10:21
Date Received: 06/16/17 09:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	485281	06/23/17 18:27	WAS	TAL SAV

Client Sample ID: M4Z8

Lab Sample ID: 680-140029-3

Matrix: Water

Date Collected: 06/15/17 11:08
Date Received: 06/16/17 09:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	485281	06/23/17 18:50	WAS	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TestAmerica Savannah

Login Sample Receipt Checklist

Client: Unisys Corporation

Job Number: 680-140029-1

Login Number: 140029

List Source: TestAmerica Savannah

List Number: 1

Creator: Banda, Christy S

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140029-1

Laboratory: TestAmerica Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Puerto Rico	State Program	2	GA00006	12-31-17

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**GROUNDWATER ANALYTICAL SAMPLES
ORGANIC ANALYSIS – VOLATILES IN WATER
TestAmerica Savannah Job No. 680-140108
Samples Collected June 16 and 19, 2017**



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-140108-1

Client Project/Site: VA Public Supply Wells (Annual)

For:

Unisys Corporation

Vega Alta Trust c/o Unisys Corporation

2476 Swedesford Road

Malvern, Pennsylvania 19355

Attn: Mr. Martin Howe



Authorized for release by:

6/29/2017 5:23:18 PM

Jerry Lanier, Project Manager I

(912)354-7858 e.3410

jerry.lanier@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Unisys Corporation
Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140108-1

Job ID: 680-140108-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: Unisys Corporation

Project: VA Public Supply Wells (Annual)

Report Number: 680-140108-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 06/20/2017; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.0 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB061617 Lot 041317 (680-140108-1), M8Z1 (680-140108-2), M8Z5 (680-140108-3), M8Z9 (680-140108-4), M7Z1 (680-140108-5) and M6Z6 (680-140108-6) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA Method 624. The samples were analyzed on 06/27/2017.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-485777 were outside control limits. Dichlorodifluoromethane was high biased in the matrix spikes and non-detect in the samples therefore; the data has been qualified and reported.

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Sample Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140108-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-140108-1	TB061617 Lot 041317	Water	06/16/17 00:00	06/20/17 09:00
680-140108-2	M8Z1	Water	06/16/17 09:52	06/20/17 09:00
680-140108-3	M8Z5	Water	06/16/17 10:34	06/20/17 09:00
680-140108-4	M8Z9	Water	06/16/17 11:27	06/20/17 09:00
680-140108-5	M7Z1	Water	06/16/17 08:30	06/20/17 09:00
680-140108-6	M6Z6	Water	06/19/17 11:11	06/20/17 09:00

Method Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140108-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL SAV

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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Definitions/Glossary

Client: Unisys Corporation
Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140108-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

%	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Unisys Corporation
Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140108-1

Client Sample ID: TB061617 Lot 041317

Lab Sample ID: 680-140108-1

No Detections.

Client Sample ID: M8Z1

Lab Sample ID: 680-140108-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	1.8		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	1.0		1.0		ug/L	1	624		Total/NA
Trichloroethene	17		1.0		ug/L	1	624		Total/NA

Client Sample ID: M8Z5

Lab Sample ID: 680-140108-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	2.3		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	1.4		1.0		ug/L	1	624		Total/NA
Trichloroethene	23		1.0		ug/L	1	624		Total/NA

Client Sample ID: M8Z9

Lab Sample ID: 680-140108-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	2.0		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	1.4		1.0		ug/L	1	624		Total/NA
Trichloroethene	20		1.0		ug/L	1	624		Total/NA

Client Sample ID: M7Z1

Lab Sample ID: 680-140108-5

No Detections.

Client Sample ID: M6Z6

Lab Sample ID: 680-140108-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	14		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	1.5		1.0		ug/L	1	624		Total/NA
Trichloroethene	1.0		1.0		ug/L	1	624		Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140108-1

Client Sample ID: TB061617 Lot 041317

Date Collected: 06/16/17 00:00

Date Received: 06/20/17 09:00

Lab Sample ID: 680-140108-1

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/27/17 15:58	1
1,1-Dichloroethane	ND		1.0		ug/L			06/27/17 15:58	1
1,1-Dichloroethene	ND		1.0		ug/L			06/27/17 15:58	1
1,2-Dichloropropane	ND		1.0		ug/L			06/27/17 15:58	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/27/17 15:58	1
Bromodichloromethane	ND		1.0		ug/L			06/27/17 15:58	1
Chloroform	ND		1.0		ug/L			06/27/17 15:58	1
Chloromethane	ND		1.0		ug/L			06/27/17 15:58	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/27/17 15:58	1
Dibromochloromethane	ND		1.0		ug/L			06/27/17 15:58	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/27/17 15:58	1
Ethylbenzene	ND		1.0		ug/L			06/27/17 15:58	1
Methylene Chloride	ND		5.0		ug/L			06/27/17 15:58	1
Naphthalene	ND		5.0		ug/L			06/27/17 15:58	1
Styrene	ND		1.0		ug/L			06/27/17 15:58	1
Tetrachloroethene	ND		1.0		ug/L			06/27/17 15:58	1
Toluene	ND		1.0		ug/L			06/27/17 15:58	1
Trichloroethene	ND		1.0		ug/L			06/27/17 15:58	1
Trichlorofluoromethane	ND		1.0		ug/L			06/27/17 15:58	1
Vinyl chloride	ND		1.0		ug/L			06/27/17 15:58	1
Xylenes, Total	ND		2.0		ug/L			06/27/17 15:58	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/27/17 15:58	1
Surrogate				Prepared		Analyzed		Dil Fac	
Toluene-d8 (Surr)	100			79 - 119				06/27/17 15:58	
1,2-Dichloroethane-d4 (Surr)	97			70 - 130				06/27/17 15:58	
4-Bromofluorobenzene (Surr)	99			71 - 121				06/27/17 15:58	
Dibromofluoromethane (Surr)	99			77 - 129				06/27/17 15:58	

Client Sample ID: M8Z1

Lab Sample ID: 680-140108-2

Date Collected: 06/16/17 09:52

Date Received: 06/20/17 09:00

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/27/17 18:37	1
1,1-Dichloroethane	ND		1.0		ug/L			06/27/17 18:37	1
1,1-Dichloroethene	ND		1.0		ug/L			06/27/17 18:37	1
1,2-Dichloropropane	ND		1.0		ug/L			06/27/17 18:37	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/27/17 18:37	1
Bromodichloromethane	ND		1.0		ug/L			06/27/17 18:37	1
Chloroform	1.8		1.0		ug/L			06/27/17 18:37	1
Chloromethane	ND		1.0		ug/L			06/27/17 18:37	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/27/17 18:37	1
Dibromochloromethane	ND		1.0		ug/L			06/27/17 18:37	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/27/17 18:37	1
Ethylbenzene	ND		1.0		ug/L			06/27/17 18:37	1
Methylene Chloride	ND		5.0		ug/L			06/27/17 18:37	1
Naphthalene	ND		5.0		ug/L			06/27/17 18:37	1
Styrene	ND		1.0		ug/L			06/27/17 18:37	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140108-1

Client Sample ID: M8Z1

Date Collected: 06/16/17 09:52

Date Received: 06/20/17 09:00

Lab Sample ID: 680-140108-2

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	1.0		1.0		ug/L			06/27/17 18:37	1
Toluene	ND		1.0		ug/L			06/27/17 18:37	1
Trichloroethene	17		1.0		ug/L			06/27/17 18:37	1
Trichlorofluoromethane	ND		1.0		ug/L			06/27/17 18:37	1
Vinyl chloride	ND		1.0		ug/L			06/27/17 18:37	1
Xylenes, Total	ND		2.0		ug/L			06/27/17 18:37	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/27/17 18:37	1
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Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		79 - 119					06/27/17 18:37	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 130					06/27/17 18:37	1
4-Bromofluorobenzene (Surr)	98		71 - 121					06/27/17 18:37	1
Dibromofluoromethane (Surr)	100		77 - 129					06/27/17 18:37	1

Client Sample ID: M8Z5

Date Collected: 06/16/17 10:34

Date Received: 06/20/17 09:00

Lab Sample ID: 680-140108-3

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/27/17 19:00	1
1,1-Dichloroethane	ND		1.0		ug/L			06/27/17 19:00	1
1,1-Dichloroethene	ND		1.0		ug/L			06/27/17 19:00	1
1,2-Dichloropropane	ND		1.0		ug/L			06/27/17 19:00	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/27/17 19:00	1
Bromodichloromethane	ND		1.0		ug/L			06/27/17 19:00	1
Chloroform	2.3		1.0		ug/L			06/27/17 19:00	1
Chloromethane	ND		1.0		ug/L			06/27/17 19:00	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/27/17 19:00	1
Dibromochloromethane	ND		1.0		ug/L			06/27/17 19:00	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/27/17 19:00	1
Ethylbenzene	ND		1.0		ug/L			06/27/17 19:00	1
Methylene Chloride	ND		5.0		ug/L			06/27/17 19:00	1
Naphthalene	ND		5.0		ug/L			06/27/17 19:00	1
Styrene	ND		1.0		ug/L			06/27/17 19:00	1
Tetrachloroethene	1.4		1.0		ug/L			06/27/17 19:00	1
Toluene	ND		1.0		ug/L			06/27/17 19:00	1
Trichloroethene	23		1.0		ug/L			06/27/17 19:00	1
Trichlorofluoromethane	ND		1.0		ug/L			06/27/17 19:00	1
Vinyl chloride	ND		1.0		ug/L			06/27/17 19:00	1
Xylenes, Total	ND		2.0		ug/L			06/27/17 19:00	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/27/17 19:00	1
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Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		79 - 119					06/27/17 19:00	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 130					06/27/17 19:00	1
4-Bromofluorobenzene (Surr)	99		71 - 121					06/27/17 19:00	1
Dibromofluoromethane (Surr)	99		77 - 129					06/27/17 19:00	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140108-1

Client Sample ID: M8Z9

Date Collected: 06/16/17 11:27

Date Received: 06/20/17 09:00

Lab Sample ID: 680-140108-4

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/27/17 19:22	1
1,1-Dichloroethane	ND		1.0		ug/L			06/27/17 19:22	1
1,1-Dichloroethene	ND		1.0		ug/L			06/27/17 19:22	1
1,2-Dichloropropane	ND		1.0		ug/L			06/27/17 19:22	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/27/17 19:22	1
Bromodichloromethane	ND		1.0		ug/L			06/27/17 19:22	1
Chloroform	2.0		1.0		ug/L			06/27/17 19:22	1
Chloromethane	ND		1.0		ug/L			06/27/17 19:22	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/27/17 19:22	1
Dibromochloromethane	ND		1.0		ug/L			06/27/17 19:22	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/27/17 19:22	1
Ethylbenzene	ND		1.0		ug/L			06/27/17 19:22	1
Methylene Chloride	ND		5.0		ug/L			06/27/17 19:22	1
Naphthalene	ND		5.0		ug/L			06/27/17 19:22	1
Styrene	ND		1.0		ug/L			06/27/17 19:22	1
Tetrachloroethene	1.4		1.0		ug/L			06/27/17 19:22	1
Toluene	ND		1.0		ug/L			06/27/17 19:22	1
Trichloroethene	20		1.0		ug/L			06/27/17 19:22	1
Trichlorofluoromethane	ND		1.0		ug/L			06/27/17 19:22	1
Vinyl chloride	ND		1.0		ug/L			06/27/17 19:22	1
Xylenes, Total	ND		2.0		ug/L			06/27/17 19:22	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/27/17 19:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		79 - 119					06/27/17 19:22	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 130					06/27/17 19:22	1
4-Bromofluorobenzene (Surr)	98		71 - 121					06/27/17 19:22	1
Dibromofluoromethane (Surr)	100		77 - 129					06/27/17 19:22	1

Client Sample ID: M7Z1

Date Collected: 06/16/17 08:30

Date Received: 06/20/17 09:00

Lab Sample ID: 680-140108-5

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/27/17 19:45	1
1,1-Dichloroethane	ND		1.0		ug/L			06/27/17 19:45	1
1,1-Dichloroethene	ND		1.0		ug/L			06/27/17 19:45	1
1,2-Dichloropropane	ND		1.0		ug/L			06/27/17 19:45	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/27/17 19:45	1
Bromodichloromethane	ND		1.0		ug/L			06/27/17 19:45	1
Chloroform	ND		1.0		ug/L			06/27/17 19:45	1
Chloromethane	ND		1.0		ug/L			06/27/17 19:45	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/27/17 19:45	1
Dibromochloromethane	ND		1.0		ug/L			06/27/17 19:45	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/27/17 19:45	1
Ethylbenzene	ND		1.0		ug/L			06/27/17 19:45	1
Methylene Chloride	ND		5.0		ug/L			06/27/17 19:45	1
Naphthalene	ND		5.0		ug/L			06/27/17 19:45	1
Styrene	ND		1.0		ug/L			06/27/17 19:45	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140108-1

Client Sample ID: M7Z1

Date Collected: 06/16/17 08:30

Date Received: 06/20/17 09:00

Lab Sample ID: 680-140108-5

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		1.0		ug/L			06/27/17 19:45	1
Toluene	ND		1.0		ug/L			06/27/17 19:45	1
Trichloroethene	ND		1.0		ug/L			06/27/17 19:45	1
Trichlorofluoromethane	ND		1.0		ug/L			06/27/17 19:45	1
Vinyl chloride	ND		1.0		ug/L			06/27/17 19:45	1
Xylenes, Total	ND		2.0		ug/L			06/27/17 19:45	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/27/17 19:45	1
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Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		79 - 119					06/27/17 19:45	1
1,2-Dichloroethane-d4 (Surr)	97		70 - 130					06/27/17 19:45	1
4-Bromofluorobenzene (Surr)	99		71 - 121					06/27/17 19:45	1
Dibromofluoromethane (Surr)	99		77 - 129					06/27/17 19:45	1

Client Sample ID: M6Z6

Date Collected: 06/19/17 11:11

Date Received: 06/20/17 09:00

Lab Sample ID: 680-140108-6

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/27/17 20:30	1
1,1-Dichloroethane	ND		1.0		ug/L			06/27/17 20:30	1
1,1-Dichloroethene	ND		1.0		ug/L			06/27/17 20:30	1
1,2-Dichloropropane	ND		1.0		ug/L			06/27/17 20:30	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/27/17 20:30	1
Bromodichloromethane	ND		1.0		ug/L			06/27/17 20:30	1
Chloroform	14		1.0		ug/L			06/27/17 20:30	1
Chloromethane	ND		1.0		ug/L			06/27/17 20:30	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/27/17 20:30	1
Dibromochloromethane	ND		1.0		ug/L			06/27/17 20:30	1
Dichlorodifluoromethane	ND	F1	1.0		ug/L			06/27/17 20:30	1
Ethylbenzene	ND		1.0		ug/L			06/27/17 20:30	1
Methylene Chloride	ND		5.0		ug/L			06/27/17 20:30	1
Naphthalene	ND		5.0		ug/L			06/27/17 20:30	1
Styrene	ND		1.0		ug/L			06/27/17 20:30	1
Tetrachloroethene	1.5		1.0		ug/L			06/27/17 20:30	1
Toluene	ND		1.0		ug/L			06/27/17 20:30	1
Trichloroethene	1.0		1.0		ug/L			06/27/17 20:30	1
Trichlorofluoromethane	ND		1.0		ug/L			06/27/17 20:30	1
Vinyl chloride	ND		1.0		ug/L			06/27/17 20:30	1
Xylenes, Total	ND		2.0		ug/L			06/27/17 20:30	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/27/17 20:30	1
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Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		79 - 119					06/27/17 20:30	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 130					06/27/17 20:30	1
4-Bromofluorobenzene (Surr)	99		71 - 121					06/27/17 20:30	1
Dibromofluoromethane (Surr)	101		77 - 129					06/27/17 20:30	1

TestAmerica Savannah

Surrogate Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140108-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TOL (79-119)	12DCE (70-130)	BFB (71-121)	DBFM (77-129)
680-140108-1	TB061617 Lot 041317	100	97	99	99
680-140108-2	M8Z1	100	98	98	100
680-140108-3	M8Z5	101	98	99	99
680-140108-4	M8Z9	101	98	98	100
680-140108-5	M7Z1	100	97	99	99
680-140108-6	M6Z6	101	99	99	101
680-140108-6 MS	M6Z6	98	92	96	96
680-140108-6 MSD	M6Z6	94	90	92	93
LCS 680-485777/3	Lab Control Sample	92	94	90	95
LCSD 680-485777/4	Lab Control Sample Dup	99	98	96	99
MB 680-485777/7	Method Blank	99	96	97	97

Surrogate Legend

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140108-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-485777/7

Matrix: Water

Analysis Batch: 485777

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
1,1,1-Trichloroethane	ND				1.0		ug/L			06/27/17 15:36	1
1,1-Dichloroethane	ND				1.0		ug/L			06/27/17 15:36	1
1,1-Dichloroethene	ND				1.0		ug/L			06/27/17 15:36	1
1,2-Dichloropropane	ND				1.0		ug/L			06/27/17 15:36	1
1,4-Dichlorobenzene	ND				1.0		ug/L			06/27/17 15:36	1
Bromodichloromethane	ND				1.0		ug/L			06/27/17 15:36	1
Chloroform	ND				1.0		ug/L			06/27/17 15:36	1
Chloromethane	ND				1.0		ug/L			06/27/17 15:36	1
cis-1,2-Dichloroethene	ND				1.0		ug/L			06/27/17 15:36	1
Dibromochloromethane	ND				1.0		ug/L			06/27/17 15:36	1
Dichlorodifluoromethane	ND				1.0		ug/L			06/27/17 15:36	1
Ethylbenzene	ND				1.0		ug/L			06/27/17 15:36	1
Methylene Chloride	ND				5.0		ug/L			06/27/17 15:36	1
Naphthalene	ND				5.0		ug/L			06/27/17 15:36	1
Styrene	ND				1.0		ug/L			06/27/17 15:36	1
Tetrachloroethene	ND				1.0		ug/L			06/27/17 15:36	1
Toluene	ND				1.0		ug/L			06/27/17 15:36	1
Trichloroethene	ND				1.0		ug/L			06/27/17 15:36	1
Trichlorofluoromethane	ND				1.0		ug/L			06/27/17 15:36	1
Vinyl chloride	ND				1.0		ug/L			06/27/17 15:36	1
Xylenes, Total	ND				2.0		ug/L			06/27/17 15:36	1
trans-1,2-Dichloroethene	ND				1.0		ug/L			06/27/17 15:36	1

Surrogate	MB	MB	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Toluene-d8 (Surr)	99		99		79 - 119			06/27/17 15:36	1
1,2-Dichloroethane-d4 (Surr)	96		96		70 - 130			06/27/17 15:36	1
4-Bromofluorobenzene (Surr)	97		97		71 - 121			06/27/17 15:36	1
Dibromofluoromethane (Surr)	97		97		77 - 129			06/27/17 15:36	1

Lab Sample ID: LCS 680-485777/3

Matrix: Water

Analysis Batch: 485777

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCs	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
1,1,1-Trichloroethane	20.0	17.1		ug/L		86	52 - 162
1,1-Dichloroethane	20.0	17.4		ug/L		87	59 - 155
1,1-Dichloroethene	20.0	16.8		ug/L		84	1 - 234
1,2-Dichloropropane	20.0	18.3		ug/L		91	1 - 210
1,4-Dichlorobenzene	20.0	18.4		ug/L		92	18 - 190
Bromodichloromethane	20.0	17.6		ug/L		88	35 - 155
Chloroform	20.0	18.0		ug/L		90	51 - 138
Chloromethane	20.0	19.5		ug/L		97	1 - 273
cis-1,2-Dichloroethene	20.0	18.0		ug/L		90	60 - 131
Dibromochloromethane	20.0	17.7		ug/L		88	53 - 149
Dichlorodifluoromethane	20.0	22.4		ug/L		112	70 - 130
Ethylbenzene	20.0	17.8		ug/L		89	37 - 162
Methylene Chloride	20.0	17.9		ug/L		89	1 - 221
Naphthalene	20.0	18.9		ug/L		94	58 - 143

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

TestAmerica Job ID: 680-140108-1

Project/Site: VA Public Supply Wells (Annual)

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-485777/3

Matrix: Water

Analysis Batch: 485777

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS			Unit	D	%Rec	%Rec.
		Result	Qualifier	Limits				
Styrene	20.0	18.5		ug/L		92	50 - 150	
Tetrachloroethene	20.0	18.1		ug/L		90	64 - 148	
Toluene	20.0	17.7		ug/L		88	47 - 150	
Trichloroethene	20.0	18.2		ug/L		91	71 - 157	
Trichlorofluoromethane	20.0	17.8		ug/L		89	17 - 181	
Vinyl chloride	20.0	17.6		ug/L		88	1 - 251	
Xylenes, Total	40.0	36.1		ug/L		90	78 - 119	
trans-1,2-Dichloroethene	20.0	18.0		ug/L		90	54 - 156	

Surrogate	LCS		
	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	92		79 - 119
1,2-Dichloroethane-d4 (Surr)	94		70 - 130
4-Bromofluorobenzene (Surr)	90		71 - 121
Dibromofluoromethane (Surr)	95		77 - 129

Lab Sample ID: LCSD 680-485777/4

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analysis Batch: 485777

Analyte	Spike Added	LCSD			Unit	D	%Rec	%Rec.	RPD	Limit
		Result	Qualifier	Limits						
1,1,1-Trichloroethane	20.0	18.6		ug/L		93	52 - 162		8	30
1,1-Dichloroethane	20.0	18.8		ug/L		94	59 - 155		8	30
1,1-Dichloroethene	20.0	18.6		ug/L		93	1 - 234		10	30
1,2-Dichloropropane	20.0	19.2		ug/L		96	1 - 210		5	30
1,4-Dichlorobenzene	20.0	19.4		ug/L		97	18 - 190		5	30
Bromodichloromethane	20.0	18.4		ug/L		92	35 - 155		5	30
Chloroform	20.0	19.0		ug/L		95	51 - 138		6	30
Chloromethane	20.0	20.9		ug/L		105	1 - 273		7	50
cis-1,2-Dichloroethene	20.0	19.1		ug/L		96	60 - 131		6	30
Dibromochloromethane	20.0	18.7		ug/L		93	53 - 149		5	30
Dichlorodifluoromethane	20.0	24.9		ug/L		125	70 - 130		11	30
Ethylbenzene	20.0	19.3		ug/L		97	37 - 162		8	30
Methylene Chloride	20.0	18.7		ug/L		94	1 - 221		5	30
Naphthalene	20.0	19.4		ug/L		97	58 - 143		3	30
Styrene	20.0	19.8		ug/L		99	50 - 150		7	30
Tetrachloroethene	20.0	20.0		ug/L		100	64 - 148		10	30
Toluene	20.0	19.2		ug/L		96	47 - 150		8	30
Trichloroethene	20.0	19.7		ug/L		98	71 - 157		8	30
Trichlorofluoromethane	20.0	19.7		ug/L		98	17 - 181		10	30
Vinyl chloride	20.0	19.9		ug/L		99	1 - 251		12	50
Xylenes, Total	40.0	38.4		ug/L		96	78 - 119		6	30
trans-1,2-Dichloroethene	20.0	19.2		ug/L		96	54 - 156		6	30

Surrogate	LCSD		
	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	99		79 - 119
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	96		71 - 121

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140108-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-485777/4

Matrix: Water

Analysis Batch: 485777

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	99		77 - 129

Lab Sample ID: 680-140108-6 MS

Matrix: Water

Analysis Batch: 485777

Client Sample ID: M6Z6

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.	Limits
1,1,1-Trichloroethane	ND		20.0	19.4		ug/L		97	52 - 162	
1,1-Dichloroethane	ND		20.0	18.7		ug/L		93	59 - 155	
1,1-Dichloroethene	ND		20.0	19.5		ug/L		97	1 - 234	
1,2-Dichloropropane	ND		20.0	18.4		ug/L		92	1 - 210	
1,4-Dichlorobenzene	ND		20.0	18.4		ug/L		92	18 - 190	
Bromodichloromethane	ND		20.0	17.3		ug/L		86	35 - 155	
Chloroform	14		20.0	30.5		ug/L		82	51 - 138	
Chloromethane	ND		20.0	21.3		ug/L		106	1 - 273	
cis-1,2-Dichloroethene	ND		20.0	18.3		ug/L		92	60 - 131	
Dibromochloromethane	ND		20.0	16.6		ug/L		83	53 - 149	
Dichlorodifluoromethane	ND F1		20.0	27.6	F1	ug/L		138	70 - 130	
Ethylbenzene	ND		20.0	19.2		ug/L		96	37 - 162	
Methylene Chloride	ND		20.0	18.1		ug/L		90	1 - 221	
Naphthalene	ND		20.0	12.2		ug/L		61	58 - 143	
Styrene	ND		20.0	18.8		ug/L		94	50 - 150	
Tetrachloroethene	1.5		20.0	21.3		ug/L		99	64 - 148	
Toluene	ND		20.0	18.9		ug/L		95	47 - 150	
Trichloroethene	1.0		20.0	20.6		ug/L		98	71 - 157	
Trichlorofluoromethane	ND		20.0	21.1		ug/L		105	17 - 181	
Vinyl chloride	ND		20.0	21.4		ug/L		107	1 - 251	
Xylenes, Total	ND		40.0	38.1		ug/L		95	78 - 119	
trans-1,2-Dichloroethene	ND		20.0	19.3		ug/L		97	54 - 156	

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	98		79 - 119
1,2-Dichloroethane-d4 (Surr)	92		70 - 130
4-Bromofluorobenzene (Surr)	96		71 - 121
Dibromofluoromethane (Surr)	96		77 - 129

Lab Sample ID: 680-140108-6 MSD

Matrix: Water

Analysis Batch: 485777

Client Sample ID: M6Z6

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.	RPD	Limit
1,1,1-Trichloroethane	ND		20.0	18.7		ug/L		94	52 - 162	4	30
1,1-Dichloroethane	ND		20.0	18.2		ug/L		91	59 - 155	2	30
1,1-Dichloroethene	ND		20.0	18.8		ug/L		94	1 - 234	4	30
1,2-Dichloropropane	ND		20.0	17.9		ug/L		89	1 - 210	3	30
1,4-Dichlorobenzene	ND		20.0	18.0		ug/L		90	18 - 190	2	30
Bromodichloromethane	ND		20.0	16.9		ug/L		84	35 - 155	2	30
Chloroform	14		20.0	29.1		ug/L		75	51 - 138	5	30

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140108-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-140108-6 MSD

Matrix: Water

Analysis Batch: 485777

Client Sample ID: M6Z6

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Chloromethane	ND		20.0	21.4		ug/L		107	1 - 273	1	50	
cis-1,2-Dichloroethene	ND		20.0	18.3		ug/L		91	60 - 131	0	30	
Dibromochloromethane	ND		20.0	16.2		ug/L		81	53 - 149	2	30	
Dichlorodifluoromethane	ND	F1	20.0	26.8	F1	ug/L		134	70 - 130	3	30	
Ethylbenzene	ND		20.0	18.6		ug/L		93	37 - 162	3	30	
Methylene Chloride	ND		20.0	18.0		ug/L		90	1 - 221	1	30	
Naphthalene	ND		20.0	15.6		ug/L		78	58 - 143	24	30	
Styrene	ND		20.0	18.1		ug/L		91	50 - 150	4	30	
Tetrachloroethene	1.5		20.0	20.9		ug/L		97	64 - 148	2	30	
Toluene	ND		20.0	18.5		ug/L		93	47 - 150	2	30	
Trichloroethene	1.0		20.0	20.1		ug/L		96	71 - 157	2	30	
Trichlorofluoromethane	ND		20.0	20.5		ug/L		103	17 - 181	3	30	
Vinyl chloride	ND		20.0	20.8		ug/L		104	1 - 251	3	50	
Xylenes, Total	ND		40.0	36.9		ug/L		92	78 - 119	3	30	
trans-1,2-Dichloroethene	ND		20.0	19.1		ug/L		95	54 - 156	1	30	

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	94		79 - 119
1,2-Dichloroethane-d4 (Surr)	90		70 - 130
4-Bromofluorobenzene (Surr)	92		71 - 121
Dibromofluoromethane (Surr)	93		77 - 129

TestAmerica Savannah

QC Association Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140108-1

GC/MS VOA

Analysis Batch: 485777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-140108-1	TB061617 Lot 041317	Total/NA	Water	624	1
680-140108-2	M8Z1	Total/NA	Water	624	2
680-140108-3	M8Z5	Total/NA	Water	624	3
680-140108-4	M8Z9	Total/NA	Water	624	4
680-140108-5	M7Z1	Total/NA	Water	624	5
680-140108-6	M6Z6	Total/NA	Water	624	6
MB 680-485777/7	Method Blank	Total/NA	Water	624	7
LCS 680-485777/3	Lab Control Sample	Total/NA	Water	624	8
LCSD 680-485777/4	Lab Control Sample Dup	Total/NA	Water	624	9
680-140108-6 MS	M6Z6	Total/NA	Water	624	10
680-140108-6 MSD	M6Z6	Total/NA	Water	624	11

Lab Chronicle

Client: Unisys Corporation
 Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140108-1

Client Sample ID: TB061617 Lot 041317

Lab Sample ID: 680-140108-1

Matrix: Water

Date Collected: 06/16/17 00:00
 Date Received: 06/20/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	485777	06/27/17 15:58	WAS	TAL SAV

Instrument ID: CMSC

Client Sample ID: M8Z1

Lab Sample ID: 680-140108-2

Matrix: Water

Date Collected: 06/16/17 09:52
 Date Received: 06/20/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	485777	06/27/17 18:37	WAS	TAL SAV

Instrument ID: CMSC

Client Sample ID: M8Z5

Lab Sample ID: 680-140108-3

Matrix: Water

Date Collected: 06/16/17 10:34
 Date Received: 06/20/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	485777	06/27/17 19:00	WAS	TAL SAV

Instrument ID: CMSC

Client Sample ID: M8Z9

Lab Sample ID: 680-140108-4

Matrix: Water

Date Collected: 06/16/17 11:27
 Date Received: 06/20/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	485777	06/27/17 19:22	WAS	TAL SAV

Instrument ID: CMSC

Client Sample ID: M7Z1

Lab Sample ID: 680-140108-5

Matrix: Water

Date Collected: 06/16/17 08:30
 Date Received: 06/20/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	485777	06/27/17 19:45	WAS	TAL SAV

Instrument ID: CMSC

Client Sample ID: M6Z6

Lab Sample ID: 680-140108-6

Matrix: Water

Date Collected: 06/19/17 11:11
 Date Received: 06/20/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	485777	06/27/17 20:30	WAS	TAL SAV

Instrument ID: CMSC

TestAmerica Savannah

Lab Chronicle

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140108-1

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Phone:
Fax:

Alternate Laboratory Name/Location

Serial Number 69991

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

THE LEADER IN ENVIRONMENTAL TESTING

Page 20 of 22

6/29/2017

Login Sample Receipt Checklist

Client: Unisys Corporation

Job Number: 680-140108-1

Login Number: 140108

List Source: TestAmerica Savannah

List Number: 1

Creator: Banda, Christy S

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Containers recd broken. Sufficient sample in remaining containers for analysis.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140108-1

Laboratory: TestAmerica Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Puerto Rico	State Program	2	GA00006	12-31-17

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**GROUNDWATER ANALYTICAL SAMPLES
ORGANIC ANALYSIS – VOLATILES IN WATER
TestAmerica Savannah Job No. 680-140208
Samples Collected June 21, 2017**



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-140208-1

Client Project/Site: VA Public Supply Wells (Annual)

Revision: 1

For:

Unisys Corporation

Vega Alta Trust c/o Unisys Corporation

2476 Swedesford Road

Malvern, Pennsylvania 19355

Attn: Mr. Martin Howe

Authorized for release by:

7/21/2017 5:41:45 PM

Jerry Lanier, Project Manager I

(912)354-7858 e.3410

jerry.lanier@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Unisys Corporation
Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140208-1

Job ID: 680-140208-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: Unisys Corporation

Project: VA Public Supply Wells (Annual)

Report Number: 680-140208-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 06/22/2017; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.3 C.

The final report was revised to remove wording from the case narrative not pertaining to this jobs samples.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB062117 Lot 041317 (680-140208-1) and M13Z8 (680-140208-2) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA Method 624. The samples were analyzed on 06/27/2017.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Sample Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140208-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-140208-1	TB062117 Lot 041317	Water	06/21/17 00:00	06/22/17 09:45
680-140208-2	M13Z8	Water	06/21/17 09:57	06/22/17 09:45

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Method Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140208-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL SAV

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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Definitions/Glossary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140208-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.	1
%	Listed under the "D" column to designate that the result is reported on a dry weight basis	2
%R	Percent Recovery	3
CFL	Contains Free Liquid	4
CNF	Contains No Free Liquid	5
DER	Duplicate Error Ratio (normalized absolute difference)	6
Dil Fac	Dilution Factor	7
DL	Detection Limit (DoD/DOE)	8
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	9
DLC	Decision Level Concentration (Radiochemistry)	10
EDL	Estimated Detection Limit (Dioxin)	11
LOD	Limit of Detection (DoD/DOE)	12
LOQ	Limit of Quantitation (DoD/DOE)	13
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
PQL	Practical Quantitation Limit	
QC	Quality Control	
RER	Relative Error Ratio (Radiochemistry)	
RL	Reporting Limit or Requested Limit (Radiochemistry)	
RPD	Relative Percent Difference, a measure of the relative difference between two points	
TEF	Toxicity Equivalent Factor (Dioxin)	
TEQ	Toxicity Equivalent Quotient (Dioxin)	

Detection Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140208-1

Client Sample ID: TB062117 Lot 041317

Lab Sample ID: 680-140208-1

No Detections.

Client Sample ID: M13Z8

Lab Sample ID: 680-140208-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	2.1		1.0		ug/L	1	624		Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140208-1

Client Sample ID: TB062117 Lot 041317

Date Collected: 06/21/17 00:00

Date Received: 06/22/17 09:45

Lab Sample ID: 680-140208-1

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/27/17 16:21	1
1,1-Dichloroethane	ND		1.0		ug/L			06/27/17 16:21	1
1,1-Dichloroethene	ND		1.0		ug/L			06/27/17 16:21	1
1,2-Dichloropropane	ND		1.0		ug/L			06/27/17 16:21	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/27/17 16:21	1
Bromodichloromethane	ND		1.0		ug/L			06/27/17 16:21	1
Chloroform	ND		1.0		ug/L			06/27/17 16:21	1
Chloromethane	ND		1.0		ug/L			06/27/17 16:21	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/27/17 16:21	1
Dibromochloromethane	ND		1.0		ug/L			06/27/17 16:21	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/27/17 16:21	1
Ethylbenzene	ND		1.0		ug/L			06/27/17 16:21	1
Methylene Chloride	ND		5.0		ug/L			06/27/17 16:21	1
Naphthalene	ND		5.0		ug/L			06/27/17 16:21	1
Styrene	ND		1.0		ug/L			06/27/17 16:21	1
Tetrachloroethene	ND		1.0		ug/L			06/27/17 16:21	1
Toluene	ND		1.0		ug/L			06/27/17 16:21	1
Trichloroethene	ND		1.0		ug/L			06/27/17 16:21	1
Trichlorofluoromethane	ND		1.0		ug/L			06/27/17 16:21	1
Vinyl chloride	ND		1.0		ug/L			06/27/17 16:21	1
Xylenes, Total	ND		2.0		ug/L			06/27/17 16:21	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/27/17 16:21	1
Surrogate				Prepared		Analyzed		Dil Fac	
Toluene-d8 (Surr)	101			79 - 119				06/27/17 16:21	
1,2-Dichloroethane-d4 (Surr)	98			70 - 130				06/27/17 16:21	
4-Bromofluorobenzene (Surr)	98			71 - 121				06/27/17 16:21	
Dibromofluoromethane (Surr)	99			77 - 129				06/27/17 16:21	

Client Sample ID: M13Z8

Lab Sample ID: 680-140208-2

Date Collected: 06/21/17 09:57

Date Received: 06/22/17 09:45

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/27/17 20:08	1
1,1-Dichloroethane	ND		1.0		ug/L			06/27/17 20:08	1
1,1-Dichloroethene	ND		1.0		ug/L			06/27/17 20:08	1
1,2-Dichloropropane	ND		1.0		ug/L			06/27/17 20:08	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/27/17 20:08	1
Bromodichloromethane	ND		1.0		ug/L			06/27/17 20:08	1
Chloroform	2.1		1.0		ug/L			06/27/17 20:08	1
Chloromethane	ND		1.0		ug/L			06/27/17 20:08	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/27/17 20:08	1
Dibromochloromethane	ND		1.0		ug/L			06/27/17 20:08	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/27/17 20:08	1
Ethylbenzene	ND		1.0		ug/L			06/27/17 20:08	1
Methylene Chloride	ND		5.0		ug/L			06/27/17 20:08	1
Naphthalene	ND		5.0		ug/L			06/27/17 20:08	1
Styrene	ND		1.0		ug/L			06/27/17 20:08	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140208-1

Client Sample ID: M13Z8

Date Collected: 06/21/17 09:57

Date Received: 06/22/17 09:45

Lab Sample ID: 680-140208-2

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		1.0		ug/L			06/27/17 20:08	1
Toluene	ND		1.0		ug/L			06/27/17 20:08	1
Trichloroethene	ND		1.0		ug/L			06/27/17 20:08	1
Trichlorofluoromethane	ND		1.0		ug/L			06/27/17 20:08	1
Vinyl chloride	ND		1.0		ug/L			06/27/17 20:08	1
Xylenes, Total	ND		2.0		ug/L			06/27/17 20:08	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/27/17 20:08	1
<hr/>									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		79 - 119					06/27/17 20:08	1
1,2-Dichloroethane-d4 (Surr)	97		70 - 130					06/27/17 20:08	1
4-Bromofluorobenzene (Surr)	97		71 - 121					06/27/17 20:08	1
Dibromofluoromethane (Surr)	100		77 - 129					06/27/17 20:08	1

Surrogate Summary

Client: Unisys Corporation

TestAmerica Job ID: 680-140208-1

Project/Site: VA Public Supply Wells (Annual)

Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TOL (79-119)	12DCE (70-130)	BFB (71-121)	DBFM (77-129)				
680-140208-1	TB062117 Lot 041317	101	98	98	99				
680-140208-2	M13Z8	101	97	97	100				
LCS 680-485777/3	Lab Control Sample	92	94	90	95				
LCSD 680-485777/4	Lab Control Sample Dup	99	98	96	99				
MB 680-485777/7	Method Blank	99	96	97	97				

Surrogate Legend

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140208-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-485777/7

Matrix: Water

Analysis Batch: 485777

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
1,1,1-Trichloroethane	ND				1.0		ug/L			06/27/17 15:36	1
1,1-Dichloroethane	ND				1.0		ug/L			06/27/17 15:36	1
1,1-Dichloroethene	ND				1.0		ug/L			06/27/17 15:36	1
1,2-Dichloropropane	ND				1.0		ug/L			06/27/17 15:36	1
1,4-Dichlorobenzene	ND				1.0		ug/L			06/27/17 15:36	1
Bromodichloromethane	ND				1.0		ug/L			06/27/17 15:36	1
Chloroform	ND				1.0		ug/L			06/27/17 15:36	1
Chloromethane	ND				1.0		ug/L			06/27/17 15:36	1
cis-1,2-Dichloroethene	ND				1.0		ug/L			06/27/17 15:36	1
Dibromochloromethane	ND				1.0		ug/L			06/27/17 15:36	1
Dichlorodifluoromethane	ND				1.0		ug/L			06/27/17 15:36	1
Ethylbenzene	ND				1.0		ug/L			06/27/17 15:36	1
Methylene Chloride	ND				5.0		ug/L			06/27/17 15:36	1
Naphthalene	ND				5.0		ug/L			06/27/17 15:36	1
Styrene	ND				1.0		ug/L			06/27/17 15:36	1
Tetrachloroethene	ND				1.0		ug/L			06/27/17 15:36	1
Toluene	ND				1.0		ug/L			06/27/17 15:36	1
Trichloroethene	ND				1.0		ug/L			06/27/17 15:36	1
Trichlorofluoromethane	ND				1.0		ug/L			06/27/17 15:36	1
Vinyl chloride	ND				1.0		ug/L			06/27/17 15:36	1
Xylenes, Total	ND				2.0		ug/L			06/27/17 15:36	1
trans-1,2-Dichloroethene	ND				1.0		ug/L			06/27/17 15:36	1

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Toluene-d8 (Surr)	99		99		79 - 119			1
1,2-Dichloroethane-d4 (Surr)	96		96		70 - 130			1
4-Bromofluorobenzene (Surr)	97		97		71 - 121			1
Dibromofluoromethane (Surr)	97		97		77 - 129			1

Lab Sample ID: LCS 680-485777/3

Matrix: Water

Analysis Batch: 485777

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LC%	LCS	Result	Qualifier	Unit	D	%Rec	Limits	%Rec.
		Added	Added							
1,1,1-Trichloroethane		20.0		17.1		ug/L		86	52 - 162	
1,1-Dichloroethane		20.0		17.4		ug/L		87	59 - 155	
1,1-Dichloroethene		20.0		16.8		ug/L		84	1 - 234	
1,2-Dichloropropane		20.0		18.3		ug/L		91	1 - 210	
1,4-Dichlorobenzene		20.0		18.4		ug/L		92	18 - 190	
Bromodichloromethane		20.0		17.6		ug/L		88	35 - 155	
Chloroform		20.0		18.0		ug/L		90	51 - 138	
Chloromethane		20.0		19.5		ug/L		97	1 - 273	
cis-1,2-Dichloroethene		20.0		18.0		ug/L		90	60 - 131	
Dibromochloromethane		20.0		17.7		ug/L		88	53 - 149	
Dichlorodifluoromethane		20.0		22.4		ug/L		112	70 - 130	
Ethylbenzene		20.0		17.8		ug/L		89	37 - 162	
Methylene Chloride		20.0		17.9		ug/L		89	1 - 221	
Naphthalene		20.0		18.9		ug/L		94	58 - 143	

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

TestAmerica Job ID: 680-140208-1

Project/Site: VA Public Supply Wells (Annual)

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-485777/3

Matrix: Water

Analysis Batch: 485777

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS			Unit	D	%Rec	%Rec.
		Result	Qualifier	Limits				
Styrene	20.0	18.5		ug/L		92	50 - 150	
Tetrachloroethene	20.0	18.1		ug/L		90	64 - 148	
Toluene	20.0	17.7		ug/L		88	47 - 150	
Trichloroethene	20.0	18.2		ug/L		91	71 - 157	
Trichlorofluoromethane	20.0	17.8		ug/L		89	17 - 181	
Vinyl chloride	20.0	17.6		ug/L		88	1 - 251	
Xylenes, Total	40.0	36.1		ug/L		90	78 - 119	
trans-1,2-Dichloroethene	20.0	18.0		ug/L		90	54 - 156	

Surrogate	LCS		
	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	92		79 - 119
1,2-Dichloroethane-d4 (Surr)	94		70 - 130
4-Bromofluorobenzene (Surr)	90		71 - 121
Dibromofluoromethane (Surr)	95		77 - 129

Lab Sample ID: LCSD 680-485777/4

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analysis Batch: 485777

Analyte	Spike Added	LCSD			Unit	D	%Rec	%Rec.	RPD	Limit
		Result	Qualifier	Limits						
1,1,1-Trichloroethane	20.0	18.6		ug/L		93	52 - 162		8	30
1,1-Dichloroethane	20.0	18.8		ug/L		94	59 - 155		8	30
1,1-Dichloroethene	20.0	18.6		ug/L		93	1 - 234		10	30
1,2-Dichloropropane	20.0	19.2		ug/L		96	1 - 210		5	30
1,4-Dichlorobenzene	20.0	19.4		ug/L		97	18 - 190		5	30
Bromodichloromethane	20.0	18.4		ug/L		92	35 - 155		5	30
Chloroform	20.0	19.0		ug/L		95	51 - 138		6	30
Chloromethane	20.0	20.9		ug/L		105	1 - 273		7	50
cis-1,2-Dichloroethene	20.0	19.1		ug/L		96	60 - 131		6	30
Dibromochloromethane	20.0	18.7		ug/L		93	53 - 149		5	30
Dichlorodifluoromethane	20.0	24.9		ug/L		125	70 - 130		11	30
Ethylbenzene	20.0	19.3		ug/L		97	37 - 162		8	30
Methylene Chloride	20.0	18.7		ug/L		94	1 - 221		5	30
Naphthalene	20.0	19.4		ug/L		97	58 - 143		3	30
Styrene	20.0	19.8		ug/L		99	50 - 150		7	30
Tetrachloroethene	20.0	20.0		ug/L		100	64 - 148		10	30
Toluene	20.0	19.2		ug/L		96	47 - 150		8	30
Trichloroethene	20.0	19.7		ug/L		98	71 - 157		8	30
Trichlorofluoromethane	20.0	19.7		ug/L		98	17 - 181		10	30
Vinyl chloride	20.0	19.9		ug/L		99	1 - 251		12	50
Xylenes, Total	40.0	38.4		ug/L		96	78 - 119		6	30
trans-1,2-Dichloroethene	20.0	19.2		ug/L		96	54 - 156		6	30

Surrogate	LCSD		
	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	99		79 - 119
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	96		71 - 121

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140208-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-485777/4

Matrix: Water

Analysis Batch: 485777

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD	LCSD	
	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surrogate)	99		77 - 129

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TestAmerica Savannah

QC Association Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140208-1

GC/MS VOA

Analysis Batch: 485777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-140208-1	TB062117 Lot 041317	Total/NA	Water	624	
680-140208-2	M13Z8	Total/NA	Water	624	
MB 680-485777/7	Method Blank	Total/NA	Water	624	
LCS 680-485777/3	Lab Control Sample	Total/NA	Water	624	
LCSD 680-485777/4	Lab Control Sample Dup	Total/NA	Water	624	

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Lab Chronicle

Client: Unisys Corporation
Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140208-1

Client Sample ID: TB062117 Lot 041317

Lab Sample ID: 680-140208-1

Matrix: Water

Date Collected: 06/21/17 00:00

Date Received: 06/22/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	485777	06/27/17 16:21	WAS	TAL SAV

Client Sample ID: M13Z8

Lab Sample ID: 680-140208-2

Matrix: Water

Date Collected: 06/21/17 09:57

Date Received: 06/22/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	485777	06/27/17 20:08	WAS	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Login Sample Receipt Checklist

Client: Unisys Corporation

Job Number: 680-140208-1

Login Number: 140208

List Source: TestAmerica Savannah

List Number: 1

Creator: Banda, Christy S

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140208-1

Laboratory: TestAmerica Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Puerto Rico	State Program	2	GA00006	12-31-17

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**GROUNDWATER ANALYTICAL SAMPLES
ORGANIC ANALYSIS – VOLATILES IN WATER
TestAmerica Savannah Job No. 680-140374
Samples Collected June 23, 2017**



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-140374-1

Client Project/Site: VA Public Supply Wells (Annual)

For:

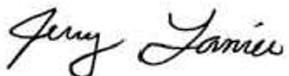
Unisys Corporation

Vega Alta Trust c/o Unisys Corporation

2476 Swedesford Road

Malvern, Pennsylvania 19355

Attn: Mr. Martin Howe



Authorized for release by:

7/11/2017 6:27:42 PM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Unisys Corporation
Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

Job ID: 680-140374-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: Unisys Corporation

Project: VA Public Supply Wells (Annual)

Report Number: 680-140374-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 06/27/2017; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.0 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB062317 Lot 041317 (680-140374-1), M9Z3 (680-140374-2), M9Z5 (680-140374-3), M9Z7 (680-140374-4), M9Z9 (680-140374-5), M31Z7 (680-140374-6) and EB062317 (680-140374-7) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA Method 624. The samples were analyzed on 06/29/2017.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-486137.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Sample Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-140374-1	TB062317 Lot 041317	Water	06/23/17 00:00	06/27/17 09:00
680-140374-2	M9Z3	Water	06/23/17 10:33	06/27/17 09:00
680-140374-3	M9Z5	Water	06/23/17 11:11	06/27/17 09:00
680-140374-4	M9Z7	Water	06/23/17 12:05	06/27/17 09:00
680-140374-5	M9Z9	Water	06/23/17 12:45	06/27/17 09:00
680-140374-6	M31Z7	Water	06/23/17 09:00	06/27/17 09:00
680-140374-7	EB062317	Water	06/23/17 11:34	06/27/17 09:00

Method Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL SAV

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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Definitions/Glossary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Unisys Corporation
 Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

Client Sample ID: TB062317 Lot 041317

Lab Sample ID: 680-140374-1

No Detections.

Client Sample ID: M9Z3

Lab Sample ID: 680-140374-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	4.6		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	1.5		1.0		ug/L	1	624		Total/NA
Trichloroethene	24		1.0		ug/L	1	624		Total/NA

Client Sample ID: M9Z5

Lab Sample ID: 680-140374-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	5.1		1.0		ug/L	1	624		Total/NA
cis-1,2-Dichloroethene	1.2		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	1.6		1.0		ug/L	1	624		Total/NA
Trichloroethene	28		1.0		ug/L	1	624		Total/NA

Client Sample ID: M9Z7

Lab Sample ID: 680-140374-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	4.1		1.0		ug/L	1	624		Total/NA
cis-1,2-Dichloroethene	1.0		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	1.5		1.0		ug/L	1	624		Total/NA
Trichloroethene	24		1.0		ug/L	1	624		Total/NA

Client Sample ID: M9Z9

Lab Sample ID: 680-140374-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	4.9		1.0		ug/L	1	624		Total/NA
cis-1,2-Dichloroethene	1.2		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	1.6		1.0		ug/L	1	624		Total/NA
Trichloroethene	28		1.0		ug/L	1	624		Total/NA

Client Sample ID: M31Z7

Lab Sample ID: 680-140374-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	4.7		1.0		ug/L	1	624		Total/NA
cis-1,2-Dichloroethene	1.1		1.0		ug/L	1	624		Total/NA
Tetrachloroethene	1.5		1.0		ug/L	1	624		Total/NA
Trichloroethene	25		1.0		ug/L	1	624		Total/NA

Client Sample ID: EB062317

Lab Sample ID: 680-140374-7

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

Client Sample ID: TB062317 Lot 041317

Lab Sample ID: 680-140374-1

Matrix: Water

Date Collected: 06/23/17 00:00

Date Received: 06/27/17 09:00

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/29/17 15:39	1
1,1-Dichloroethane	ND		1.0		ug/L			06/29/17 15:39	1
1,1-Dichloroethene	ND		1.0		ug/L			06/29/17 15:39	1
1,2-Dichloropropane	ND		1.0		ug/L			06/29/17 15:39	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/29/17 15:39	1
Bromodichloromethane	ND		1.0		ug/L			06/29/17 15:39	1
Chloroform	ND		1.0		ug/L			06/29/17 15:39	1
Chloromethane	ND		1.0		ug/L			06/29/17 15:39	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/29/17 15:39	1
Dibromochloromethane	ND		1.0		ug/L			06/29/17 15:39	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/29/17 15:39	1
Ethylbenzene	ND		1.0		ug/L			06/29/17 15:39	1
Methylene Chloride	ND		5.0		ug/L			06/29/17 15:39	1
Naphthalene	ND		5.0		ug/L			06/29/17 15:39	1
Styrene	ND		1.0		ug/L			06/29/17 15:39	1
Tetrachloroethene	ND		1.0		ug/L			06/29/17 15:39	1
Toluene	ND		1.0		ug/L			06/29/17 15:39	1
Trichloroethene	ND		1.0		ug/L			06/29/17 15:39	1
Trichlorofluoromethane	ND		1.0		ug/L			06/29/17 15:39	1
Vinyl chloride	ND		1.0		ug/L			06/29/17 15:39	1
Xylenes, Total	ND		2.0		ug/L			06/29/17 15:39	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/29/17 15:39	1
Surrogate				Prepared		Analyzed		Dil Fac	
Toluene-d8 (Surr)	97			79 - 119				06/29/17 15:39	
1,2-Dichloroethane-d4 (Surr)	94			70 - 130				06/29/17 15:39	
4-Bromofluorobenzene (Surr)	99			71 - 121				06/29/17 15:39	
Dibromofluoromethane (Surr)	97			77 - 129				06/29/17 15:39	

Client Sample ID: M9Z3

Lab Sample ID: 680-140374-2

Matrix: Water

Date Collected: 06/23/17 10:33

Date Received: 06/27/17 09:00

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/29/17 17:10	1
1,1-Dichloroethane	ND		1.0		ug/L			06/29/17 17:10	1
1,1-Dichloroethene	ND		1.0		ug/L			06/29/17 17:10	1
1,2-Dichloropropane	ND		1.0		ug/L			06/29/17 17:10	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/29/17 17:10	1
Bromodichloromethane	ND		1.0		ug/L			06/29/17 17:10	1
Chloroform	4.6		1.0		ug/L			06/29/17 17:10	1
Chloromethane	ND		1.0		ug/L			06/29/17 17:10	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/29/17 17:10	1
Dibromochloromethane	ND		1.0		ug/L			06/29/17 17:10	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/29/17 17:10	1
Ethylbenzene	ND		1.0		ug/L			06/29/17 17:10	1
Methylene Chloride	ND		5.0		ug/L			06/29/17 17:10	1
Naphthalene	ND		5.0		ug/L			06/29/17 17:10	1
Styrene	ND		1.0		ug/L			06/29/17 17:10	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

Client Sample ID: M9Z3

Date Collected: 06/23/17 10:33

Date Received: 06/27/17 09:00

Lab Sample ID: 680-140374-2

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	1.5		1.0		ug/L			06/29/17 17:10	1
Toluene	ND		1.0		ug/L			06/29/17 17:10	1
Trichloroethene	24		1.0		ug/L			06/29/17 17:10	1
Trichlorofluoromethane	ND		1.0		ug/L			06/29/17 17:10	1
Vinyl chloride	ND		1.0		ug/L			06/29/17 17:10	1
Xylenes, Total	ND		2.0		ug/L			06/29/17 17:10	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/29/17 17:10	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98			79 - 119				06/29/17 17:10	1
1,2-Dichloroethane-d4 (Surr)	96			70 - 130				06/29/17 17:10	1
4-Bromofluorobenzene (Surr)	98			71 - 121				06/29/17 17:10	1
Dibromofluoromethane (Surr)	98			77 - 129				06/29/17 17:10	1

Client Sample ID: M9Z5

Date Collected: 06/23/17 11:11

Date Received: 06/27/17 09:00

Lab Sample ID: 680-140374-3

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/29/17 17:33	1
1,1-Dichloroethane	ND		1.0		ug/L			06/29/17 17:33	1
1,1-Dichloroethene	ND		1.0		ug/L			06/29/17 17:33	1
1,2-Dichloropropane	ND		1.0		ug/L			06/29/17 17:33	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/29/17 17:33	1
Bromodichloromethane	ND		1.0		ug/L			06/29/17 17:33	1
Chloroform	5.1		1.0		ug/L			06/29/17 17:33	1
Chloromethane	ND		1.0		ug/L			06/29/17 17:33	1
cis-1,2-Dichloroethene	1.2		1.0		ug/L			06/29/17 17:33	1
Dibromochloromethane	ND		1.0		ug/L			06/29/17 17:33	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/29/17 17:33	1
Ethylbenzene	ND		1.0		ug/L			06/29/17 17:33	1
Methylene Chloride	ND		5.0		ug/L			06/29/17 17:33	1
Naphthalene	ND		5.0		ug/L			06/29/17 17:33	1
Styrene	ND		1.0		ug/L			06/29/17 17:33	1
Tetrachloroethene	1.6		1.0		ug/L			06/29/17 17:33	1
Toluene	ND		1.0		ug/L			06/29/17 17:33	1
Trichloroethene	28		1.0		ug/L			06/29/17 17:33	1
Trichlorofluoromethane	ND		1.0		ug/L			06/29/17 17:33	1
Vinyl chloride	ND		1.0		ug/L			06/29/17 17:33	1
Xylenes, Total	ND		2.0		ug/L			06/29/17 17:33	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/29/17 17:33	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98			79 - 119				06/29/17 17:33	1
1,2-Dichloroethane-d4 (Surr)	96			70 - 130				06/29/17 17:33	1
4-Bromofluorobenzene (Surr)	98			71 - 121				06/29/17 17:33	1
Dibromofluoromethane (Surr)	99			77 - 129				06/29/17 17:33	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

Client Sample ID: M9Z7

Date Collected: 06/23/17 12:05

Date Received: 06/27/17 09:00

Lab Sample ID: 680-140374-4

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/29/17 17:56	1
1,1-Dichloroethane	ND		1.0		ug/L			06/29/17 17:56	1
1,1-Dichloroethene	ND		1.0		ug/L			06/29/17 17:56	1
1,2-Dichloropropane	ND		1.0		ug/L			06/29/17 17:56	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/29/17 17:56	1
Bromodichloromethane	ND		1.0		ug/L			06/29/17 17:56	1
Chloroform	4.1		1.0		ug/L			06/29/17 17:56	1
Chloromethane	ND		1.0		ug/L			06/29/17 17:56	1
cis-1,2-Dichloroethene	1.0		1.0		ug/L			06/29/17 17:56	1
Dibromochloromethane	ND		1.0		ug/L			06/29/17 17:56	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/29/17 17:56	1
Ethylbenzene	ND		1.0		ug/L			06/29/17 17:56	1
Methylene Chloride	ND		5.0		ug/L			06/29/17 17:56	1
Naphthalene	ND		5.0		ug/L			06/29/17 17:56	1
Styrene	ND		1.0		ug/L			06/29/17 17:56	1
Tetrachloroethene	1.5		1.0		ug/L			06/29/17 17:56	1
Toluene	ND		1.0		ug/L			06/29/17 17:56	1
Trichloroethene	24		1.0		ug/L			06/29/17 17:56	1
Trichlorofluoromethane	ND		1.0		ug/L			06/29/17 17:56	1
Vinyl chloride	ND		1.0		ug/L			06/29/17 17:56	1
Xylenes, Total	ND		2.0		ug/L			06/29/17 17:56	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/29/17 17:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		79 - 119					06/29/17 17:56	1
1,2-Dichloroethane-d4 (Surr)	97		70 - 130					06/29/17 17:56	1
4-Bromofluorobenzene (Surr)	99		71 - 121					06/29/17 17:56	1
Dibromofluoromethane (Surr)	98		77 - 129					06/29/17 17:56	1

Client Sample ID: M9Z9

Date Collected: 06/23/17 12:45

Date Received: 06/27/17 09:00

Lab Sample ID: 680-140374-5

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/29/17 18:18	1
1,1-Dichloroethane	ND		1.0		ug/L			06/29/17 18:18	1
1,1-Dichloroethene	ND		1.0		ug/L			06/29/17 18:18	1
1,2-Dichloropropane	ND		1.0		ug/L			06/29/17 18:18	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/29/17 18:18	1
Bromodichloromethane	ND		1.0		ug/L			06/29/17 18:18	1
Chloroform	4.9		1.0		ug/L			06/29/17 18:18	1
Chloromethane	ND		1.0		ug/L			06/29/17 18:18	1
cis-1,2-Dichloroethene	1.2		1.0		ug/L			06/29/17 18:18	1
Dibromochloromethane	ND		1.0		ug/L			06/29/17 18:18	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/29/17 18:18	1
Ethylbenzene	ND		1.0		ug/L			06/29/17 18:18	1
Methylene Chloride	ND		5.0		ug/L			06/29/17 18:18	1
Naphthalene	ND		5.0		ug/L			06/29/17 18:18	1
Styrene	ND		1.0		ug/L			06/29/17 18:18	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

Client Sample ID: M9Z9

Date Collected: 06/23/17 12:45

Date Received: 06/27/17 09:00

Lab Sample ID: 680-140374-5

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	1.6		1.0		ug/L			06/29/17 18:18	1
Toluene	ND		1.0		ug/L			06/29/17 18:18	1
Trichloroethene	28		1.0		ug/L			06/29/17 18:18	1
Trichlorofluoromethane	ND		1.0		ug/L			06/29/17 18:18	1
Vinyl chloride	ND		1.0		ug/L			06/29/17 18:18	1
Xylenes, Total	ND		2.0		ug/L			06/29/17 18:18	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/29/17 18:18	1
<hr/>									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		79 - 119					06/29/17 18:18	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 130					06/29/17 18:18	1
4-Bromofluorobenzene (Surr)	99		71 - 121					06/29/17 18:18	1
Dibromofluoromethane (Surr)	100		77 - 129					06/29/17 18:18	1

Client Sample ID: M31Z7

Date Collected: 06/23/17 09:00

Date Received: 06/27/17 09:00

Lab Sample ID: 680-140374-6

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/29/17 18:41	1
1,1-Dichloroethane	ND		1.0		ug/L			06/29/17 18:41	1
1,1-Dichloroethene	ND		1.0		ug/L			06/29/17 18:41	1
1,2-Dichloropropane	ND		1.0		ug/L			06/29/17 18:41	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/29/17 18:41	1
Bromodichloromethane	ND		1.0		ug/L			06/29/17 18:41	1
Chloroform	4.7		1.0		ug/L			06/29/17 18:41	1
Chloromethane	ND		1.0		ug/L			06/29/17 18:41	1
cis-1,2-Dichloroethene	1.1		1.0		ug/L			06/29/17 18:41	1
Dibromochloromethane	ND		1.0		ug/L			06/29/17 18:41	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/29/17 18:41	1
Ethylbenzene	ND		1.0		ug/L			06/29/17 18:41	1
Methylene Chloride	ND		5.0		ug/L			06/29/17 18:41	1
Naphthalene	ND		5.0		ug/L			06/29/17 18:41	1
Styrene	ND		1.0		ug/L			06/29/17 18:41	1
Tetrachloroethene	1.5		1.0		ug/L			06/29/17 18:41	1
Toluene	ND		1.0		ug/L			06/29/17 18:41	1
Trichloroethene	25		1.0		ug/L			06/29/17 18:41	1
Trichlorofluoromethane	ND		1.0		ug/L			06/29/17 18:41	1
Vinyl chloride	ND		1.0		ug/L			06/29/17 18:41	1
Xylenes, Total	ND		2.0		ug/L			06/29/17 18:41	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/29/17 18:41	1
<hr/>									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		79 - 119					06/29/17 18:41	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 130					06/29/17 18:41	1
4-Bromofluorobenzene (Surr)	99		71 - 121					06/29/17 18:41	1
Dibromofluoromethane (Surr)	102		77 - 129					06/29/17 18:41	1

TestAmerica Savannah

Client Sample Results

Client: Unisys Corporation
 Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

Client Sample ID: EB062317
Date Collected: 06/23/17 11:34
Date Received: 06/27/17 09:00

Lab Sample ID: 680-140374-7
Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L		06/29/17 16:02		1
1,1-Dichloroethane	ND		1.0		ug/L		06/29/17 16:02		1
1,1-Dichloroethene	ND		1.0		ug/L		06/29/17 16:02		1
1,2-Dichloropropane	ND		1.0		ug/L		06/29/17 16:02		1
1,4-Dichlorobenzene	ND		1.0		ug/L		06/29/17 16:02		1
Bromodichloromethane	ND		1.0		ug/L		06/29/17 16:02		1
Chloroform	ND		1.0		ug/L		06/29/17 16:02		1
Chloromethane	ND		1.0		ug/L		06/29/17 16:02		1
cis-1,2-Dichloroethene	ND		1.0		ug/L		06/29/17 16:02		1
Dibromochloromethane	ND		1.0		ug/L		06/29/17 16:02		1
Dichlorodifluoromethane	ND		1.0		ug/L		06/29/17 16:02		1
Ethylbenzene	ND		1.0		ug/L		06/29/17 16:02		1
Methylene Chloride	ND		5.0		ug/L		06/29/17 16:02		1
Naphthalene	ND		5.0		ug/L		06/29/17 16:02		1
Styrene	ND		1.0		ug/L		06/29/17 16:02		1
Tetrachloroethene	ND		1.0		ug/L		06/29/17 16:02		1
Toluene	ND		1.0		ug/L		06/29/17 16:02		1
Trichloroethene	ND		1.0		ug/L		06/29/17 16:02		1
Trichlorofluoromethane	ND		1.0		ug/L		06/29/17 16:02		1
Vinyl chloride	ND		1.0		ug/L		06/29/17 16:02		1
Xylenes, Total	ND		2.0		ug/L		06/29/17 16:02		1
trans-1,2-Dichloroethene	ND		1.0		ug/L		06/29/17 16:02		1
Surrogate				%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97			79 - 119				06/29/17 16:02	1
1,2-Dichloroethane-d4 (Surr)	95			70 - 130				06/29/17 16:02	1
4-Bromofluorobenzene (Surr)	98			71 - 121				06/29/17 16:02	1
Dibromofluoromethane (Surr)	98			77 - 129				06/29/17 16:02	1

Surrogate Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TOL (79-119)	12DCE (70-130)	BFB (71-121)	DBFM (77-129)						
680-140374-1	TB062317 Lot 041317	97	94	99	97						
680-140374-2	M9Z3	98	96	98	98						
680-140374-3	M9Z5	98	96	98	99						
680-140374-4	M9Z7	98	97	99	98						
680-140374-5	M9Z9	97	96	99	100						
680-140374-6	M31Z7	98	96	99	102						
680-140374-7	EB062317	97	95	98	98						
LCS 680-486137/3	Lab Control Sample	94	94	93	97						
LCSD 680-486137/4	Lab Control Sample Dup	95	98	98	100						
MB 680-486137/7	Method Blank	98	104	98	103						

Surrogate Legend

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-486137/7

Matrix: Water

Analysis Batch: 486137

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
1,1,1-Trichloroethane	ND				1.0		ug/L			06/29/17 15:16	1
1,1-Dichloroethane	ND				1.0		ug/L			06/29/17 15:16	1
1,1-Dichloroethene	ND				1.0		ug/L			06/29/17 15:16	1
1,2-Dichloropropane	ND				1.0		ug/L			06/29/17 15:16	1
1,4-Dichlorobenzene	ND				1.0		ug/L			06/29/17 15:16	1
Bromodichloromethane	ND				1.0		ug/L			06/29/17 15:16	1
Chloroform	ND				1.0		ug/L			06/29/17 15:16	1
Chloromethane	ND				1.0		ug/L			06/29/17 15:16	1
cis-1,2-Dichloroethene	ND				1.0		ug/L			06/29/17 15:16	1
Dibromochloromethane	ND				1.0		ug/L			06/29/17 15:16	1
Dichlorodifluoromethane	ND				1.0		ug/L			06/29/17 15:16	1
Ethylbenzene	ND				1.0		ug/L			06/29/17 15:16	1
Methylene Chloride	ND				5.0		ug/L			06/29/17 15:16	1
Naphthalene	ND				5.0		ug/L			06/29/17 15:16	1
Styrene	ND				1.0		ug/L			06/29/17 15:16	1
Tetrachloroethene	ND				1.0		ug/L			06/29/17 15:16	1
Toluene	ND				1.0		ug/L			06/29/17 15:16	1
Trichloroethene	ND				1.0		ug/L			06/29/17 15:16	1
Trichlorofluoromethane	ND				1.0		ug/L			06/29/17 15:16	1
Vinyl chloride	ND				1.0		ug/L			06/29/17 15:16	1
Xylenes, Total	ND				2.0		ug/L			06/29/17 15:16	1
trans-1,2-Dichloroethene	ND				1.0		ug/L			06/29/17 15:16	1

Surrogate	MB	MB	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Toluene-d8 (Surr)	98		98		79 - 119			06/29/17 15:16	1
1,2-Dichloroethane-d4 (Surr)	104				70 - 130			06/29/17 15:16	1
4-Bromofluorobenzene (Surr)	98				71 - 121			06/29/17 15:16	1
Dibromofluoromethane (Surr)	103				77 - 129			06/29/17 15:16	1

Lab Sample ID: LCS 680-486137/3

Matrix: Water

Analysis Batch: 486137

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LC%	LCS	Result	Qualifier	Unit	D	%Rec	Limits	%Rec.
		Added	Added							
1,1,1-Trichloroethane		20.0		18.1		ug/L		90	52 - 162	
1,1-Dichloroethane		20.0		17.7		ug/L		89	59 - 155	
1,1-Dichloroethene		20.0		17.0		ug/L		85	1 - 234	
1,2-Dichloropropane		20.0		18.8		ug/L		94	1 - 210	
1,4-Dichlorobenzene		20.0		18.9		ug/L		95	18 - 190	
Bromodichloromethane		20.0		18.0		ug/L		90	35 - 155	
Chloroform		20.0		18.4		ug/L		92	51 - 138	
Chloromethane		20.0		20.4		ug/L		102	1 - 273	
cis-1,2-Dichloroethene		20.0		18.1		ug/L		90	60 - 131	
Dibromochloromethane		20.0		17.8		ug/L		89	53 - 149	
Dichlorodifluoromethane		20.0		20.8		ug/L		104	70 - 130	
Ethylbenzene		20.0		18.8		ug/L		94	37 - 162	
Methylene Chloride		20.0		17.6		ug/L		88	1 - 221	
Naphthalene		20.0		21.1		ug/L		106	58 - 143	

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-486137/3

Matrix: Water

Analysis Batch: 486137

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS			Unit	D	%Rec	%Rec.
		Result	Qualifier	Limits				
Styrene	20.0	19.3		ug/L		96	50 - 150	
Tetrachloroethene	20.0	19.2		ug/L		96	64 - 148	
Toluene	20.0	18.3		ug/L		92	47 - 150	
Trichloroethene	20.0	19.1		ug/L		96	71 - 157	
Trichlorofluoromethane	20.0	17.4		ug/L		87	17 - 181	
Vinyl chloride	20.0	16.9		ug/L		84	1 - 251	
Xylenes, Total	40.0	37.4		ug/L		94	78 - 119	
trans-1,2-Dichloroethene	20.0	17.7		ug/L		88	54 - 156	

LCS LCS

Surrogate	%Recovery	LCS		Limits
		Qualifier	Limits	
Toluene-d8 (Surr)	94		79 - 119	
1,2-Dichloroethane-d4 (Surr)	94		70 - 130	
4-Bromofluorobenzene (Surr)	93		71 - 121	
Dibromofluoromethane (Surr)	97		77 - 129	

Lab Sample ID: LCSD 680-486137/4

Matrix: Water

Analysis Batch: 486137

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD			Unit	D	%Rec	%Rec.	RPD	Limit
		Result	Qualifier	Limits						
1,1,1-Trichloroethane	20.0	17.3		ug/L		87	52 - 162	4	30	
1,1-Dichloroethane	20.0	17.8		ug/L		89	59 - 155	0	30	
1,1-Dichloroethene	20.0	16.1		ug/L		81	1 - 234	5	30	
1,2-Dichloropropane	20.0	19.3		ug/L		96	1 - 210	3	30	
1,4-Dichlorobenzene	20.0	19.7		ug/L		99	18 - 190	4	30	
Bromodichloromethane	20.0	18.5		ug/L		93	35 - 155	3	30	
Chloroform	20.0	18.7		ug/L		94	51 - 138	2	30	
Chloromethane	20.0	20.3		ug/L		102	1 - 273	0	50	
cis-1,2-Dichloroethene	20.0	18.3		ug/L		91	60 - 131	1	30	
Dibromochloromethane	20.0	18.6		ug/L		93	53 - 149	4	30	
Dichlorodifluoromethane	20.0	19.1		ug/L		96	70 - 130	8	30	
Ethylbenzene	20.0	18.7		ug/L		93	37 - 162	1	30	
Methylene Chloride	20.0	18.4		ug/L		92	1 - 221	4	30	
Naphthalene	20.0	22.0		ug/L		110	58 - 143	4	30	
Styrene	20.0	19.6		ug/L		98	50 - 150	1	30	
Tetrachloroethene	20.0	18.9		ug/L		94	64 - 148	1	30	
Toluene	20.0	18.5		ug/L		92	47 - 150	1	30	
Trichloroethene	20.0	19.1		ug/L		96	71 - 157	0	30	
Trichlorofluoromethane	20.0	16.5		ug/L		83	17 - 181	5	30	
Vinyl chloride	20.0	16.3		ug/L		81	1 - 251	4	50	
Xylenes, Total	40.0	37.7		ug/L		94	78 - 119	1	30	
trans-1,2-Dichloroethene	20.0	17.6		ug/L		88	54 - 156	0	30	

LCSD LCSD

Surrogate	%Recovery	LCSD		Limits
		Qualifier	Limits	
Toluene-d8 (Surr)	95		79 - 119	
1,2-Dichloroethane-d4 (Surr)	98		70 - 130	
4-Bromofluorobenzene (Surr)	98		71 - 121	

TestAmerica Savannah

QC Sample Results

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-486137/4

Matrix: Water

Analysis Batch: 486137

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surrogate)	100		77 - 129

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TestAmerica Savannah

QC Association Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

GC/MS VOA

Analysis Batch: 486137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-140374-1	TB062317 Lot 041317	Total/NA	Water	624	5
680-140374-2	M9Z3	Total/NA	Water	624	6
680-140374-3	M9Z5	Total/NA	Water	624	7
680-140374-4	M9Z7	Total/NA	Water	624	8
680-140374-5	M9Z9	Total/NA	Water	624	9
680-140374-6	M31Z7	Total/NA	Water	624	10
680-140374-7	EB062317	Total/NA	Water	624	11
MB 680-486137/7	Method Blank	Total/NA	Water	624	12
LCS 680-486137/3	Lab Control Sample	Total/NA	Water	624	13
LCSD 680-486137/4	Lab Control Sample Dup	Total/NA	Water	624	

Lab Chronicle

Client: Unisys Corporation
 Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

Client Sample ID: TB062317 Lot 041317

Lab Sample ID: 680-140374-1

Matrix: Water

Date Collected: 06/23/17 00:00
 Date Received: 06/27/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	486137	06/29/17 15:39	JD1	TAL SAV

Instrument ID: CMSC

Client Sample ID: M9Z3

Lab Sample ID: 680-140374-2

Matrix: Water

Date Collected: 06/23/17 10:33
 Date Received: 06/27/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	486137	06/29/17 17:10	JD1	TAL SAV

Instrument ID: CMSC

Client Sample ID: M9Z5

Lab Sample ID: 680-140374-3

Matrix: Water

Date Collected: 06/23/17 11:11
 Date Received: 06/27/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	486137	06/29/17 17:33	JD1	TAL SAV

Instrument ID: CMSC

Client Sample ID: M9Z7

Lab Sample ID: 680-140374-4

Matrix: Water

Date Collected: 06/23/17 12:05
 Date Received: 06/27/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	486137	06/29/17 17:56	JD1	TAL SAV

Instrument ID: CMSC

Client Sample ID: M9Z9

Lab Sample ID: 680-140374-5

Matrix: Water

Date Collected: 06/23/17 12:45
 Date Received: 06/27/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	486137	06/29/17 18:18	JD1	TAL SAV

Instrument ID: CMSC

Client Sample ID: M31Z7

Lab Sample ID: 680-140374-6

Matrix: Water

Date Collected: 06/23/17 09:00
 Date Received: 06/27/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	486137	06/29/17 18:41	JD1	TAL SAV

Instrument ID: CMSC

TestAmerica Savannah

Lab Chronicle

Client: Unisys Corporation
Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

Client Sample ID: EB062317

Date Collected: 06/23/17 11:34

Date Received: 06/27/17 09:00

Lab Sample ID: 680-140374-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	5 mL	5 mL	486137	06/29/17 16:02	JD1	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Login Sample Receipt Checklist

Client: Unisys Corporation

Job Number: 680-140374-1

Login Number: 140374

List Source: TestAmerica Savannah

List Number: 1

Creator: Flanagan, Naomi V

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Unisys Corporation

Project/Site: VA Public Supply Wells (Annual)

TestAmerica Job ID: 680-140374-1

Laboratory: TestAmerica Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Puerto Rico	State Program	2	GA00006	12-31-17

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